NICE RAPID REVIEW

The Effectiveness of National Health Service Intensive Treatments for Smoking Cessation in England

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1. Executive Summary

The National Health Service (NHS) smoking cessation services in England provide interventions to affect smoking cessation across the population. This rapid review examines the effectiveness of the NHS intensive smoking cessation treatments in England. The review contains assessments of available data, in a background reflecting other relevant literature. The available data has been assessed to answer nine preset questions examining in detail the effectiveness of the NHS cessation services and their mode of delivery, delivery settings and their effects on specific sub-groups.

Method: A comprehensive search was conducted. A total of 4,802 titles and abstracts were screened and full paper copies of 5 SRs, 12 RCTs, 20 UK studies and 11 published reports identified in the literature search and 9 unpublished reports were obtained and screened by two reviewers. 32 studies were data extracted and quality assessed by two reviewers.

Results: There is a dearth of good quality evidence in relation to many of the research questions and the available evidence is indicative rather than definitive.

NHS services affect cessation rates. NHS intensive interventions for smoking cessation are effective in the short-term (4 weeks) and they are reasonably effective in the long term, with between 13-23% of the successful short-term quitters remaining abstinent (based on self-report) at 52 weeks.

The content of the interventions may influence their effectiveness. ‘Intermediate interventions’ appear to be effective in facilitating smoking cessation at 4 weeks and pharmacy-delivered interventions achieve CO-validated cessation rates at 4 weeks of approximately 20%.

There is also evidence that the mode of delivery influences effectiveness. Group interventions may be more effective than those delivered one-on-one, although both types of intervention are essential for the continuation of the services. While ‘buddy’ systems do not increase the effectiveness of group interventions, they do increase the effectiveness of one-to-one interventions.

The settings may have an effect. There is some indirect evidence that the setting may influence effectiveness, but this evidence is not conclusive. However, there is strong evidence that inpatient interventions in hospital settings are effective in facilitating smoking cessation.

External factors may affect the effectiveness of NHS services. A number of external factors, such as target setting and timeliness of national guidance, appear to have influenced the effectiveness of intensive smoking cessation interventions delivered through the NHS, although this qualitative evidence has not been evaluated.

The characteristics of certain sub-groups also have an effect on the effectiveness of the NHS services. Age, sex, level of addictedness and previous quit attempts are all correlated with quitting success. While females set more quit dates than males, they are less likely to succeed in quitting than males. Older smokers (both male and female) are also more likely to quit successfully than younger smokers. While heavily addicted smokers find it harder to quit, the evidence regarding the role played by previous quit attempts is inconclusive.

Several sub-populations face unique barriers in attempting to quit smoking. Pregnant women, smokers from routine and manual groups and institutionalised populations all face substantial barriers that impede smoking cessation attempts, although further research is needed to provide a fuller picture of the effectiveness of NHS stop smoking services for these sub-populations.

All of these assessments reflect the quality of the data available and therefore do not provide a comprehensive picture. In particular, the consistent collection and reporting of specific data reflecting on sex, gender, age, occupation and diversity criteria would allow for finer analyses and more tailored assessments to take place.
## EVIDENCE STATEMENTS

<table>
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<th>No</th>
<th>Statements on strength and applicability of evidence</th>
<th>Grade</th>
<th>Evidence</th>
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<td><strong>General Evidence Statement</strong></td>
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<td>Overall, there is a limited body of available evidence on many of the research questions posed for this rapid review. In many cases the quality of the evidence is low and in other cases there are very few available studies on the issue under examination. There are also several general problems with the data that are routinely collected or embedded in intervention studies. These problems affect the comprehensiveness of the data, its generalisability and its utility in indicating intervention improvements and new research questions.</td>
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<td>Pp. 20-21</td>
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<td></td>
<td><strong>Overall success of NHS stop smoking services</strong></td>
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<td>1</td>
<td>Overall, six 3- reports and one 2++ study provide evidence that intensive interventions for smoking cessation through the NHS Stop Smoking Services appear to be effective in the short term; on average over half of the clients setting quit dates through the services self-report as quit at 4 weeks. However, these statistics should be treated with some caution as it appears that PCTs are using different baselines to measure success. As all seven studies took place within the English smoking cessation services, they are directly applicable to the target population.</td>
<td>six 3- case reports and one 2++ study</td>
<td>DH2001a (3-), DH2001b (3-), DH2002 (3-), DH2003 (3-), DH2004 (3-), DH2005 (3-), Judge et al. 2005 (2++) (Pp. 22-23 text)</td>
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<td>2</td>
<td>Overall, one 3- report, one 2- study, two 2+ studies and one 2++ study provide evidence that intensive interventions for smoking cessation through the NHS stop smoking services appear to be reasonably effective in the long term. On average between 13-23% of the clients who self-report as successful quitters at 4 weeks through the services self-report as abstinent at 52 weeks – a long term success rate that is broadly consistent with international findings. As all studies took place within the English smoking cessation services, they are directly applicable to the target population.</td>
<td>One 3- case report, two 2+ studies, one 2- study and one 2++ study</td>
<td>DH2001a (3-), Ferguson et al. 2005 (2++), Smith 2006 (2+), Jones et al. 2005 (2+), Watt 2005 (2-) (Pp. 23–25 text)</td>
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<td>3</td>
<td>Evidence from two 3- bulletins indicates that intermediate interventions delivered by</td>
<td>Two 3- case</td>
<td>DH2001a (3-); DH2001b (3-)</td>
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community advisors achieve self-reported cessation rates of between 34-45% at 4 weeks – although these results do not necessarily reflect the outcomes currently being achieved these inventions given the substantial development of the services since 2001.

As these studies took place within English smoking cessation services, they are directly relevant to the target population.

Evidence from a 1++ structured review indicates that pharmacy-delivered interventions may have a positive effect on smoking cessation rates. This finding is confirmed in a recent 2++ study which reports that pharmacy-delivered interventions in Glasgow produce 4 week CO-validated quit rates of approximately 20%. The study also indicates that pharmacy-delivered interventions have the potential to reach and treat large numbers of smokers – especially those from disadvantaged areas.

As these studies took place within UK smoking cessation services, they are directly relevant to the target population.

Overall, two studies provide a body of 2++ evidence that group interventions may produce higher CO-validated quit rates at 4 weeks than one-on-one interventions. However, one-to-one interventions are also effective and many clients express a clear preference for one-to-one treatment. Moreover, in some contexts (particularly rural areas), group treatment is simply unfeasible. Therefore, one-to-one interventions are a crucial component of the NHS stop smoking services as smokers need to be given a choice of treatment options.

As both studies all took place within the English smoking cessation services, they are directly applicable to the target population.

Evidence from two 1++ studies suggests that while buddy systems more than double the CO-validated 4 week effectiveness of one-to-one interventions, they do not substantially increase the effectiveness of group interventions for smoking cessation.

Information on the effect of the site/setting on service the effective of smoking cessation interventions is limited. Evidence from a 2++ study indicates that the location of treatment may indirectly influence the effectiveness of smoking cessation interventions.

As this study took place within the UK
## Smoking Cessation Programme

8. Overall, two 1++ systematic reviews provide strong evidence that smoking cessation interventions amongst inpatients can be effective in creating modest to substantial increases in CO-validated smoking cessation rates up to 12 months in this population. Findings from four more recent 1++ studies and one 1+ study are mixed; however, on the whole they indicate that interventions with at least two months post-discharge telephone follow up are more likely to be successful than programmes of short duration.

The majority of the studies took place outside of the UK in a wide range of countries, including Australia, Canada, the USA and Norway. However, it is likely that their findings are applicable to the UK, given the broad similarities in these populations.


9. A 2++ study suggests that more intensive one-to-one interventions achieve higher CO-validated success rates at 4 weeks than less intensive interventions. However, a 1++ RCT in a primary care setting suggests that intensity alone does not increase the effectiveness of one-to-one interventions in this setting. The findings of this study suggest that more intensive one-to-one interventions may be more effective if they are accompanied by external motivations or pressures to quit (such as ‘buddy’ support or smoking-related health problems).

As these studies took place within the English smoking cessation services, their findings are directly applicable to the target population.

| One 1++ RCT and one 2++ study | Aveyard et al. in press (1++), Bauld et al. 2003 (2++) |

### External factors that have influenced the effectiveness of NHS stop smoking services

10. Although target setting encouraged senior management to prioritise the services and ensured adequate funding in the early phase of service delivery, the pressure to meet targets has resulted in significant differences in reporting processes and there are concerns that different outcomes are actually being compared on a ‘like for like’ basis. It also appears that target setting has impeded the ability of the services to focus on the priority groups they are supposed to be targeting.

| (Pp. 35-36 text) |

11. The smoking cessation services developed in line with the evidence base and government guidelines and it appears that guidance to service providers was

<p>| (Pg. 36 text) |</p>
<table>
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<th>Page</th>
<th>Background Evidence</th>
<th>Variation in effectiveness of stop smoking interventions based on factors such as age, sex, level of addiction, previous quit attempts and history of quitting</th>
<th>Variations in the effectiveness of stop smoking interventions by ethnicity</th>
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<td>12</td>
<td>Adequate in the initial phase of service delivery. Although guidance has been broadly adequate to date, structural changes within the NHS and important policy developments have created the need for further guidance. A standardised model of payment and training for primary care providers have been highlighted as particularly important.</td>
<td>(Pp. 37-38 text)</td>
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<td>14</td>
<td>Evidence</td>
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<td>15</td>
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<td>Variation in effectiveness of stop smoking interventions based on factors such as age, sex, level of addiction, previous quit attempts and history of quitting</td>
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<td>16</td>
<td>Evidence</td>
<td>Variation in effectiveness of stop smoking interventions based on factors such as age, sex, level of addiction, previous quit attempts and history of quitting</td>
<td>Variations in the effectiveness of stop smoking interventions by ethnicity</td>
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<td>Background Evidence</td>
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<td>17</td>
<td>There is no direct evidence on how minority ethnic status intersects with gender in relation to smoking and quit status in the context of interventions delivered through the stop smoking services. Background evidence indicates that females from BMEG appear to be less likely (significantly less likely in South Asian communities) to smoke than males. However, given the stigma that attaches to female smoking in many minority ethnic groups (especially South Asians), it is probable that smoking rates amongst minority ethnic females are underreported. Amongst Bangladeshi women in particular, although self-reported smoking prevalence is low, use of tobacco itself is very high (over 25%).</td>
<td>DH2003 (3-), DH2004 (3-), DH2000 (3-) (Pp. 42-43 text)</td>
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<td>18</td>
<td>There is no direct evidence on how minority ethnic status intersects with social class in relation to smoking and quit status in the context of interventions delivered through the stop smoking services. Overall, background evidence indicates that for the most part BMEG smoking does not appear to be connected with social class, expect in relation to Bangladeshi males – whose high smoking rates may be partly accounted for by the relative levels of social disadvantage in this ethnic group.</td>
<td>(Pp. 44-46 text)</td>
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<td>19</td>
<td>The evidence on how successful black and minority ethnic groups are accessing the stop smoking services is inconclusive. One 2+ study found that CO-validated quitting success at 4 weeks did not vary by ethnicity. However, because of the small numbers of people from BMEG in the study, interpretation of their results is difficult.</td>
<td>One 2+ study NEPHO 2005 (2+) (Pp. 47-48 text)</td>
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<td>20</td>
<td>Background Evidence</td>
<td>There is no direct evidence on how culturally appropriate the NHS stop smoking services are, although it seems to be the case that there are relatively few programmes overall that cater to ethnic minorities – in most cases people from these groups are incorporated into the broader NHS. However, it appears that smoking cessation interventions tailored for ethnic minorities can achieve high levels of success.</td>
<td>(Pp. 48-49 text)</td>
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<td><strong>Effectiveness of NHS stop smoking services for pregnant smokers</strong></td>
<td>21</td>
<td>Overall, five 3- bulletins and one 2++ study provide a body of evidence that between 35-51% of pregnant women self-report as successful quitters at 4 weeks through the NHS stop smoking services. However, given the unique challenges that pregnant smokers face, the utility of 4 week quit rates as a measure of service effectiveness is questionable. As all six studies took place within the English smoking cessation services, they are directly applicable to the target population.</td>
<td>Five 3-case reports and one 2++ study DH2001a (3-), DH2001b (3-), DH2002 (3-), DH2003 (3-), DH2004 (3-), Judge et al. 2005 (2++) (Pp. 49-50 text)</td>
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<td>22</td>
<td>Background Evidence</td>
<td>Background evidence shows that pregnant smokers face numerous barriers when trying to quit. They are more likely to be from routine and manual groups and may experience more pressing issues such as financial and relationship difficulties, and may also fear being judged for their smoking behaviour.</td>
<td>(Pp. 50-51 text)</td>
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<td>23</td>
<td>Background Evidence</td>
<td>Background evidence indicates that there are numerous barriers to recruiting pregnant women into smoking cessation programmes. One of the most fundamental barriers to recruitment is the problem of misreport amongst pregnant smokers – which indicates the importance of biochemically validating smoking status. Health care professionals are also often unwilling to address smoking with their pregnant clients in the fear that it will jeopardise their relationship with the clients.</td>
<td>(Pp. 51-52 text)</td>
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<td><strong>Variations in the effectiveness of stop smoking interventions for routine and manual groups</strong></td>
<td>24</td>
<td>Three 2++ studies and one 2 + study provide a body of evidence that the NHS stop smoking services have been effective overall in reaching routine and manual groups. However, one of these studies reports that there is variation within regional services, and some SHAs have been less successful in deprived smokers than other authorities.</td>
<td>Three 2++ studies and one 2+ study Baker et al. 2006 (2++), Chesterman et al. 2005 (2++), Lowey 2002 (2++), NEPHO 2005 (2+) (Pp. 55-56 text)</td>
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As all four studies took place within the English smoking cessation services, they are directly applicable to the target population.

**Overall, six 3- bulletins, one 2- study, two 2+ studies and three 2++ studies provide a consistent body of evidence that people from routine and manual groups are less successful in quitting successfully (based on both self-report and CO validation) at 4 weeks than other smokers.**

As all twelve studies took place within the English smoking cessation services, they are directly applicable to the target population.

<p>| 26 | Background evidence shows that smokers from routine and manual groups face numerous social and economic barriers that may inhibit their ability to quit. In many areas of deprivation, smoking is perceived as the norm and there is no culture of quitting. Moreover, those deprived smokers who are willing to quit may have little knowledge about the effectiveness of smoking cessation interventions and may also find it difficult to attend sessions. | (Pp. 56-58 text) |
| 27 | Background evidence shows that smokers from routine and manual groups are often more highly addicted, have been smoking since a young age, and smoke more cigarettes per week compared to professional workers, which is a key factor in explaining the lower cessation rates achieved by the NHS stop smoking services in deprived areas. | (Pg. 58 text) |
| 28 | According to a 2- study, more flexible modes of delivery help to make smoking cessation interventions more accessible for people from deprived groups and produce 12 month self-reported quit rates of 16% - which is comparable with the long-term effectiveness of the NHS stop smoking services more broadly. | One 2- study Schultz &amp; Richie 2005 (2-) |
| 29 | Background evidence indicates that up to 80% of prisoners in UK correctional facilities smoke. However, a relatively small proportion of smokers (less than 10%) access smoking cessation support whilst in prison, although demand appears to have intensified as services have become more established. According to recent reports, prisoners can achieve CO-validated 4 week quit rates of over 40%, although there appear to be substantial Variations in the effectiveness of stop smoking interventions for institutionalised populations. | (Pp. 60-61 text) |</p>
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<th>Background Evidence</th>
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<td>30</td>
<td>Smoking is a central feature of prison life and provides relief from boredom, the stressful environment as well as facilitating group membership. Therefore, prisoners face unique problems when making a quit attempt because of the endemic levels of smoking, the lack of opportunities for distraction from cravings and negative attitudes to cessation amongst staff and fellow prisoners. Despite these barriers, a number of prisoners recognise the negative aspects of smoking, including its health and financial costs and available evidence indicates that up to 50% of smokers in prison want help in quitting smoking.</td>
<td>(Pg. 62 text)</td>
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<td>31</td>
<td>Although it appears that rates of smoking are particularly high amongst people in mental health institutions in the UK, there is no available information on how effective smoking cessation support is in this setting.</td>
<td>(Pp. 62-63 text)</td>
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<td>32</td>
<td>People with mental illnesses in institutional settings face a variety of barriers in accessing services and quitting smoking. Smoking cessation in this setting can be complicated by factors such as physiological vulnerability to nicotine addiction, the fact that nicotine may reduce the side effects of some medications, the positive effects of nicotine on the brain, and the use of cigarettes as a behavioural reward and lack of access to cessation support.</td>
<td>(Pg. 63 text)</td>
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**Barriers and facilitators to implementing successful interventions**

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<th>Background Evidence</th>
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<td>33</td>
<td>Overall, it seems evident that the key barrier to implementing successful interventions is a general lack of awareness of the services and their potential effectiveness in helping smokers to quit. The key facilitators to implementing successful interventions appears to be providing flexibility and choice, assessing the individual need of the smoker, while recognising that local conditions will to some extent determine the most appropriate models of delivery.</td>
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2. Background

Cigarette smoking is the leading cause of preventable death in the United Kingdom today. Although the prevalence of smoking has declined over the twentieth century from a peak in the 1940s when it is estimated that 65% of men and 40% of women in Britain regularly smoked manufactured cigarettes (2000), the rates of smoking in the UK levelled out in the 1990s at around 27% (A. McNeill et al., 2005) (see figure 1).

![Figure 1. Cigarette Smoking Prevalence in Great Britain, 1974-2004/05](image)

(Reproduced from General Household Survey 2004/05).

In England between 1998-2002, smoking was estimated to be responsible for 86,500 deaths per year (L. Twigg et al., 2004) and currently costs the National Health Service (NHS) between approximately 1.4-1.5 billion pounds annually, from health care expenditure on smoking induced disease to sickness/invalidity benefits, widows’ pensions and other social security benefits for dependants (S. Parrot & C. Godfrey, 2004).

However, despite the economic and health impacts of smoking, it was not until 1997 that smoking finally became a political priority (A. McNeill et al., 2005). During this period, the new labour government announced an international summit on smoking and advice was sought from international experts about the most effective tobacco control policies (A. McNeill et al., 2005). Following this summit, 1998 saw the publication of the White Paper Smoking Kills, which outlined a national strategy to reduce smoking in the UK. Smoking Kills laid out a comprehensive agenda for reducing the prevalence of smoking in the UK and entailed measures such as a ban on tobacco advertising, increases in the price of tobacco, strategies to reduce smoking in work and public places, to reduce smoking uptake in children and a significant injection of funding into smoking cessation treatment services (A. McNeill et al., 2005). It was recognised that smoking cessation treatment would not influence smoking prevalence directly; rather, treatment was identified as an important component of overall tobacco control measures (A. McNeill et al., 2005).

Smoking cessation treatment was defined as including behavioural and pharmaceutical interventions such as brief advice and counselling, intensive support and the administration of nicotine replacement therapy (NRT) and bupropion. Nevertheless, when the services were initially set up NRT was not available on prescription. Smokers who were eligible to receive free prescriptions were offered...
vouchers for one week’s supply of NRT which they could use at participating pharmacies; however, this policy received a great deal of criticism because of the time and resources it drained and the dubious merits of limiting NRT to one week, which ran counter to good practice (A. McNeill et al., 2005). From April 2000 a national voucher scheme was introduced and from September of that year, eligible smokers could obtain a free weekly supply of NRT for up to 4-6 weeks of treatment. In June 2000 bupropion was introduced to the market as an NHS reimbursable drug treatment and in April 2001 NRT was finally made available on NHS prescription (A. McNeill et al., 2005). A month later, 4-mg gun, 1-mg lozenge and nicotine patches became available over the counter (A. McNeill et al., 2005).

Early guidance emphasised the importance of two extremes of smoking cessation interventions: brief, opportunistic smoking cessation interventions by health care professionals and smoking cessation clinics (A. McNeill et al., 2005). It was expected that the former would have maximum reach but minimum effectiveness and the latter would have minimum reach and maximum effectiveness (A. McNeill et al., 2005). Three levels of smoking cessation service were envisioned:

1) Specialist services (e.g. smokers’ clinics)
2) Intermediate services (e.g. in primary care and/or pharmacies)
3) Brief interventions made opportunistically by any health professional.

Only the top two categories could be funded by the new smoking cessation service monies (A. McNeill et al., 2005). However, the distinction between top two categories was discontinued in 2001 as many coordinators found it unhelpful. Moreover, from the inception of the services, the intermediate services were more extensively used than the specialist services. For example, between 2000-2001 73% of those setting quit dates went through the intermediate services (DH, 2001b).

Funding for the smoking cessation services was provided on a three-year basis contingent on the success of the first year and in 2003 a further three years of funding was allocated (138 million pounds) which ran out in March 2006 (D. Wanless, 2004). Initially the services were located in areas of greatest need – the Health Action Zones (HAZs). However, in years two and three funding was made available to develop the services more broadly.

Currently, the future funding arrangements of the stop smoking services are uncertain. However, it is anticipated that funding will continue, given the general consensus that the services remain a cost effective and important means of improving the health of the nation.

In light of the ambitious and unprecedented attempt to very rapidly implement nationwide smoking cessation services, there were numerous challenges to be confronted in the early years of service delivery. There were several factors which slowed the initial development of the smoking cessation services, including the lack of available work-force with experience in smoking cessation methods and the fact that services were largely set up outside existing primary and secondary health care services in England (T. Coleman et al., 2005; L. Bauld et al., 2005; T. Coleman et al., 2005).

Very few smoking cessation coordinators had clinical experience in smoking cessation and the new smoking cessation services had difficulties in recruiting staff because of the short term contracts that were on offer as result of funding arrangements (L. Bauld et al., 2005). Moreover, negotiation with primary care services proved more difficult than anticipated and a great deal of time was spent attempting to convince health professionals that smoking cessation services were needed – health care professionals often felt that this new stop smoking agenda merely added to their already overburdened workload.
Despite these issues, the stop smoking services appear to have been successful overall in their goal of delivering smoking cessation. According to the Department of Health statistical bulletins (DH, 2005; DH, 2004; DH, 2003; DH, 2002; DH, 2001a; DH, 2001b), between 1999 and 2005 the number of quit dates set have steadily increased and the percentage of those successfully quitting (self-report) at 4 weeks follow-up has also steadily increased.

The success of the overall tobacco control programme is evident in the decline in smoking prevalence since 1999, with current smoking prevalence rates at 25% (D. Lader & E. Goddard, 2005) and reduction in smoking prevalence of approximately 0.4% per year since 1999 (M. Jarvis, 2003). Nevertheless, the overall smoking rate masks marked socioeconomic differences in smoking patterns – and smoking remains particularly high amongst manual and routine groups. These inequalities have been recognised in a series of national targets to further reduce the prevalence of smoking. The targets in England\(^1\) are as follows:

1. Reduce adult smoking rates to 21% or less by 2010, with smoking prevalence amongst manual groups reduced to 26% or less by 2010 from 32% in 1998.
2. Reduce the proportion of women who smoke during pregnancy to 15% by 2010 with a fall to 18% by 2005.

If these targets are reached, an analysis of the cost benefits has shown that £524 million could be saved as a result of a reduction in the number of heart attacks and strokes (S. Parrot & C. Godfrey, 2004; P. Hajek et al., 2006; ASH, 2005a).

2.1. Smoking and Manual Groups

In the United Kingdom, as in most developed countries, inequalities in mortality and morbidity are strongly linked to socio-economic factors such as social class (occupation), income, level of education and area of residence (J. Chesterman et al., 2005). Indeed, tobacco is responsible for more than half the difference in male mortality between those in the highest and lowest socio-economic groups living in the UK (M. Jarvis & J. Wardle, 1999). Routine and manual workers are more likely to suffer from health problems such as cancer, heart disease respiratory diseases and stroke and smoking is the single largest contributor to these health inequalities (Royal College of Physicians, 2000). Thus, although the health of the UK population is improving steadily, manual workers on average die at a younger age than non-manual workers.

Routine and manual groups continue to smoke at significantly higher rates than other members of the UK population and the smoking prevalence rate for ‘unskilled manual’ classes in Great Britain is 32% for men and 30% for women, compared with 20% of men and 17% of women in ‘professional and managerial’ groups (ONS, 2006). Moreover, the gap between the smoking rates of manual and non-manual groups in the UK appears to be widening as there has been a sharper decline in smoking prevalence among non-manual compared with manual social groups (A. Killoran et al., 2006).

Despite the high smoking prevalence amongst routine and manual groups, smokers in these groups tend to be less interested in quitting smoking than those in professional and managerial classes. According to the 2004 Smoking-Related Behaviour and Attitudes Survey (D. Lader & E. Goddard, 2005), a larger percentage of smokers in Social Class 1 and 2 (Managerial and Professional Occupations) would like to give up smoking compared to those in Social Class 4 and 5 (routine and

\(^1\) Different targets were set for Scotland and Wales.
manual occupations): 77% versus 71%, respectively. The largest percentage (80%) of smokers who intended to give up smoking were in intermediate occupations (Social Class 3). Moreover, smokers from routine and manual groups often find quitting more difficult (see section 4.7). Despite these challenges, implementing effective (and accessible) smoking cessation interventions for smokers from routine and manual groups is crucial to ensuring the equity of the stop smoking services (A. Killoran et al., 2006).

2.2 Smoking and Pregnancy

Smoking in pregnancy is associated with a number of women’s health issues as well as foetal and neo-natal problems, including pre-term delivery, reduced birth weight, placenta damage, miscarriage, and Sudden-Infant-Death-Syndrome (Royal College of Physicians, 2000). Therefore, quitting smoking during pregnancy carries benefits for both the pregnant woman and the foetus. However, tobacco reduction and cessation interventions have produced low long term overall reductions in most international settings (L. Greaves et al., 2003).

It is clear that the percentage of women in the United Kingdom who smoke during pregnancy has decreased substantially over the past thirty years. A HEA survey on pregnancy and smoking found that in England in 1999 45% of pregnant women reported smoking in the twelve months before they became pregnant and 35% of women continued to smoke during pregnancy2 (L. A. Owen & G. L. Penn, 1999). However, rates of both spontaneous quitting and quitting due to intervention during pregnancy can be high, but misleading, as there are also generally high relapse rates post partum (L. Greaves et al., 2003).

These broader statistics mask some significant societal differences in smoking patterns during pregnancy. Smoking prevalence amongst pregnant women in the UK is strongly related to social class and rates of smoking amongst single mothers-to-be and pregnant women from manual and routine groups are significantly higher than average (B. Hamlyn et al., 2000). According to the Infant Feeding Survey, in 2000 8% of women from the ‘higher occupations’ group smoke throughout pregnancy compared with 29% of women from the ‘lower occupations’ group (B. Hamlyn et al., 2000).

In 2000/01 it was recognised that pregnant smokers require special resources and attention and the NHS stop smoking services received funding to create dedicated services, appoint champions and spread good practice – a move that is expected to contribute to the national target of reducing the smoking prevalence amongst pregnant women to 15% by 2010 (A. Killoran et al., 2006).

2.3 Conclusion

In summary, the introduction of a national programme for tobacco control in England in 1998 entailed a number of measures, including the creation of smoking cessation services for those smokers wishing to quit. The smoking cessation services were established from 1999 and despite some initial hiccups appear to have been successful in contributing to an overall decline in smoking prevalence. However, smoking rates remain particularly high in several sub-populations – especially routine

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2 These figures are significantly higher than those reported in the Infant Feeding Survey (2000) the following year, which reports that 35% of mothers smoked before pregnancy and 23% continued to smoke during pregnancy. However, the IFS survey is limited by the fact that it relies on a retrospective account of smoking activities, rather than taking a snap shot of current smoking behaviour (L. Owen et al., 1999; L. A. Owen & G. L. Penn, 1999).
and manual groups and pregnant women – and delivering effective smoking cessation interventions to these groups, as well as ‘hard to reach’ populations more generally, poses an ongoing challenge for the NHS stop smoking services.
3. Methodology

3.1 Key Definitions

NHS stop smoking service: ‘A specialist NHS supported service with staff who have nationally recognised training and dedicated time for group and 1-1 support for a series of planned sessions where the client is followed up at 1 month and the data is recorded.’

<table>
<thead>
<tr>
<th>Definition</th>
<th>Explication of terms</th>
</tr>
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<tbody>
<tr>
<td>A specialist NHS supported service</td>
<td>A NHS funded service in some way dedicated and provided by specially trained staff. Staff comprise:</td>
</tr>
<tr>
<td>with staff who have nationally recognised training and dedicated time</td>
<td>1) ‘core’ specialist advisors employed full time in the service</td>
</tr>
<tr>
<td>for group and 1-1 support</td>
<td>2) ‘community advisors’ (such as pharmacists and GP practice nurses) employed part time in the service</td>
</tr>
<tr>
<td>for a series of planned sessions</td>
<td>Evidence and current guidelines support group work, but 1-1 is desirable in some cases and because of</td>
</tr>
<tr>
<td>where the client is followed up at 1 month</td>
<td>geographical constraints. Community advisors invariably provide 1-1 sessions, whereas the core</td>
</tr>
<tr>
<td>successful quitter: ‘a successful quitter is defined as someone who has</td>
<td>specialist services also offer group sessions. These services also use nicotine replacement therapy.</td>
</tr>
<tr>
<td>not smoked at all from two weeks after their initial quit date’ (DH2001a).</td>
<td></td>
</tr>
</tbody>
</table>

3 This definition of the services has been adapted from a definition currently being employed in the Scottish stop smoking services.

4 This report retains the original service distinction employed by the NHS (brief, intermediate and intensive): the term ‘intermediate intervention’ is used to refer to the interventions delivered by community advisors and ‘intensive intervention’ is used to refer to the interventions delivered by core specialist advisors.
3.2 Literature Search

Lindsey Myers (Centre for Reviews and Dissemination, University of York) conducted the searches for this rapid review in May 2006, with input from NICE and the British Columbia Centre of Excellence for Women’s Health team. The first literature search covered systematic reviews in the standard databases. Two Medline searches were then undertaken to identify: 1) other relevant reviews and 2) other relevant studies (from 1990 onwards). This search originally produced over 24,000 records and the search strategy was modified and the keyword NHS introduced to limit the number of extraneous records. A detailed report of processes, databases, and search terms used in the review is presented in Appendix C. Studies not published in English were excluded from the review.

The searches for systematic reviews and Medline searches for reviews and RCTs and non-randomised studies identified 807, 664 and 3231 citations respectively, totalling 4702 citations. The BCCEWH team also conducted an independent search of relevant websites which identified a further 100 published reports.

3.3 Selection of Studies for Inclusion

Once the literature search was complete the project team selected relevant studies based on the criteria outlined in section 4.1 of the Public Health Guidance Methods Manual. Before acquiring papers for assessment, preliminary screening of the literature search was carried out to discard irrelevant material. Titles were initially scanned by one reviewer who removed the clearly irrelevant studies. The remaining 275 abstracts were independently scrutinised in relation to the research questions by two reviewers and those that did not directly deal with the issues raised in the research questions were eliminated. Once this sifting process was complete, paper copies of the 57 selected studies, reports and reviews were acquired for assessment.

3.3.1 Participants

To be included in the review, the studies had to examine smoking cessation interventions in the United Kingdom. The vast majority of studies identified in the literature search were deemed irrelevant as they covered interventions that took place outside of the UK. The only studies falling outside of this location included for review were those relating to inpatient interventions in secondary care – as this was an area the research team was specifically asked to follow up on by NICE.

3.3.2 Grey Literature

From the outset it was apparent that the most relevant studies would be found in the grey literature. Grey literature was accessed through four avenues:

1) National Research Register (NRR)
   The NRR listings produced in the original literature search were scrutinised by two team members (Kirsten Bell and Linda Bauld). Studies that were too early to be of benefit (because they took place before the services were established or during the early period of the service when policies and practices were still in flux) or those that did not relate directly to the key research questions were eliminated and others were followed up on to obtain paper copies of the studies (see appendix A for list of excluded NRR studies). Lindsay Myers conducted a separate search for published papers from the NRR studies. Papers or reports from 12 relevant studies listed in the NRR could not be obtained (see appendix B for details).

2) Linda Bauld provided copies of other 5 unpublished reports, primarily on the Scottish services.
3) Andy McEwan, the head of the Smoking Cessation Services Research Network (SCSRN), put out a call to members of the network asking for relevant reports and evaluations on projects conducted through the services.  
4) Background telephone interviews were conducted with 12 people working in the tobacco cessation area, many of whom provided access to unpublished reports and evaluations.  

25 reports were obtained through these four sources.  

3.3.3 Interventions  
The review included all smoking cessation interventions aimed at populations in England and other parts of the UK. The review focused on interventions that took place through the NHS, although studies on smokers within the UK population more broadly were also identified and included (mainly as background) within the review. Interventions of interest included:  
- Intensive interventions for smoking cessation conducted through the NHS  
- Intermediate interventions for smoking cessation conducted through the NHS  
- Smoking cessation interventions aimed at pregnant women  
- Smoking cessation interventions aimed at black and minority ethnic groups (BMEG)  
- Smoking cessation interventions aimed at manual and routine groups.  

3.3.4 Outcomes  
The key outcome of interest was changes in smoking status following the intervention (with biochemical validation where recorded).  

57 sources were assessed for inclusion. Full paper copies of 5 SRs, 12 RCTs, 20 UK studies and 11 published reports identified in the literature search and 9 unpublished reports were independently assessed for inclusion by two reviewers (1 paper did not arrive in time, and has not been included in the review). Of the 57 appraised studies, 3 of the SRs, 8 of the RCTs, 6 of the published studies, 9 of the published reports and 6 of the unpublished reports met the inclusion criteria for this rapid review. These 32 were used as evidence, 12 were incorporated into the review as background and 13 were excluded. A list of the 13 excluded studies with reasons for exclusion is presented in Appendix A.
Figure 2. The evidence

4,802 studies/reports identified in literature search

4,527 irrelevant sources

275 relevant sources

57 sources assessed for inclusion

218 sources scouted as background

32 studies met inclusion criteria

13 studies excluded from review

12 studies included as background

3.4 Quality Appraisal

3.4.1 Tested Evidence

All of the studies that met the inclusion criteria were rated by two independent reviewers in order to determine the strength of the evidence. Once the research design of each study was determined (using the NICE algorithm), studies were assessed for their methodological rigour and quality based on the critical appraisal checklists provided in Appendix B of the Public Health Guidance Methods Manual (see table 1). Each study was categorised by study type and graded using a code ‘+++’, ‘+’ or ‘–’, based on the extent to which the potential sources of bias had been minimised. Those studies that received discrepant ratings from the two reviewers were given to a third reviewer for final evaluation.

Table 1. Level and quality of evidence

<table>
<thead>
<tr>
<th>Type and quality of evidence</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1**</td>
<td>High quality meta-analyses, systematic reviews of RCTs, or RCTs (including cluster RCTs) with a very low risk of bias</td>
</tr>
<tr>
<td>1*</td>
<td>Well conducted meta-analyses, systematic reviews of RCTs, or RCTs (including cluster RCTs) with a low risk of bias</td>
</tr>
<tr>
<td>1</td>
<td>Meta-analyses, systematic reviews of RCTs, or RCTs (including cluster RCTs) with a high risk of bias</td>
</tr>
<tr>
<td>2**</td>
<td>High quality systematic reviews of these types of studies, or individual, non-RCTs, case-control studies, cohort studies, CBA studies, ITS, and correlation studies with a very low risk of confounding, bias or chance and a high probability that the relationship is causal</td>
</tr>
<tr>
<td>2*</td>
<td>Well conducted non-RCTs, case-control studies, cohort studies, CBA studies, ITS and correlation studies with a low risk of confounding, bias or chance and a moderate probability that the relationship is causal</td>
</tr>
<tr>
<td>2</td>
<td>Non-RCTs, case-control studies, cohort studies, CBA studies, ITS and correlation studies with a high risk – or chance – of confounding bias, and a significant risk that the relationship is not causal</td>
</tr>
<tr>
<td>3</td>
<td>Non-analytic studies (for example, case reports, case series)</td>
</tr>
<tr>
<td>4</td>
<td>Expert opinion, formal consensus</td>
</tr>
</tbody>
</table>
Several qualitative studies were included in the review; while the Public Health Guidance Methods Manual provides guidance on how their methodological rigour should be assessed, the BCCEWH team had to make a judgement about the level the qualitative studies should be assigned, based on their relevance to the research question. The research team decided that qualitative studies containing some form of quantitative analysis of survey results should receive a level 2 rating.

3.4.2 Background Evidence
Tested evidence from studies and reports provides the primary source of evidence for this review and statements regarding the strength and applicability of the evidence have been drawn solely from this material. However, direct evidence on the effectiveness on the NHS stop smoking services was not available for a number of the sub-populations highlighted in this review – although several background studies and reports exist that provide useful information regarding the smoking behaviours and attitudes amongst these sub-populations. This unrated material has been incorporated into the review as ‘background evidence’; it has been used to illustrate general trends in smoking behaviours and attitudes amongst the sub-populations of interest and should not be taken as direct evidence on the effectiveness of the NHS stop smoking services. It has been separately sign-posted in the evidence statements as ‘background evidence’ for this reason. Furthermore, several of the research questions (especially Q3 and Q9) were qualitative in nature and could not be answered through tested evidence. In response to these questions, the review also draws on background evidence and the evidence statements in these sections have been separately signposted for this reason.

3.5 Synthesis
Due to heterogeneity of design among the studies, a narrative synthesis was conducted.
4. Summary of Findings

The key question for this rapid review is: *What evidence is there of the effectiveness of intensive treatments for smoking within the NHS Stop Smoking Services?*

Within this broader question 9 specific research questions were devised:

1) What is the short term (4 week) and longer term (one year) success of the NHS stop smoking services?
2) What internal factors may have influenced the effectiveness of the NHS stop smoking services?
3) What external factors may have influenced the effectiveness of the NHS stop smoking services?
4) How does the effectiveness of stop smoking interventions vary with factors such as age, sex, level of addiction, previous quit attempts and history of quitting?
5) How does the effectiveness of stop smoking interventions vary with factors such as ethnicity?
6) How effective have the NHS stop smoking services been in reaching pregnant smokers?
7) How does the effectiveness of stop smoking interventions vary for routine and manual groups?
8) How does the effectiveness of stop smoking interventions vary for institutionalised populations?
9) What are the facilitators and what are the barriers to implementing effective smoking cessation interventions?

32 studies met the inclusion criteria for this rapid review. However, as indicated in section 3.3, some studies (particularly grey literature) that might otherwise have been excluded have still been discussed in the review on topics where limited available evidence exists. Relevant background literature has also been discussed for a number of research questions, although because it does not pertain specifically to the NHS stop smoking services, it has not been evaluated.

**Overall Strength of the Evidence**

There is a limited body of available evidence on many of the research questions posed for this rapid review. In many cases the quality of the evidence is low and in other cases there are very few available studies on the issue under examination. There are several general problems with the data that are routinely collected or embedded in intervention studies. These problems affect the comprehensiveness of the data, its generalisability and its utility in indicating intervention improvements and new research questions.

First, various studies and the NHS stop smoking services define “access” to services differently. The vast majority of services record details of people who have set quit dates, not those who have accessed the services. Furthermore, this number does not represent the number of people setting quit dates but rather quit dates themselves, as one person can set a quit date more than once in a year and the date will be counted twice.

Second, services appear to be using different baselines to measure ‘success’ – with some services using more inclusive criteria to measure 4 week quit rates than others. This undermines the validity of the monitoring data on the effectiveness of the NHS Stop smoking services as it is unclear whether like is being compared with like.

Third, there is a general lack of sex and diversity-disaggregated data collection and reporting, making it difficult to comprehensively answer some of the questions. As a
result, it is not possible to fully describe and effectively analyse the specific patterns and needs of women and men, or of women and men of diverse ethnic groups. There is also a lack of gendered and diversity-based analysis of the results of most of the studies, eliminating a full understanding of how any differences may have arisen, and the full context for understanding results and informing services. Therefore, the findings of this review should be treated as tentative rather than absolute.

**GENERAL EVIDENCE STATEMENT**

*Strength and applicability of evidence*

Overall, there is a limited body of available evidence on many of the research questions posed for this rapid review. In many cases the quality of the evidence is low and in other cases there are very few available studies on the issue under examination. There are also several general problems with the data that are routinely collected or embedded in intervention studies. These problems affect the comprehensiveness of the data, its generalisability and its utility in indicating intervention improvements and new research questions.
4.1 What is the short term (4 week) and longer term (one year) success of the NHS stop smoking services?

4.1.1 Short Term Success
Six annual statistical bulletins (rating 3-) have been published by the Department of Health (DH, 2004; DH, 2003; DH, 2002; DH, 2001a; DH, 2001b; DH, 2005) that evaluate the short term (4 week) success of the NHS stop smoking services between 1999 and 2005 – the findings of these statistical bulletins are graphically represented in figure 3.

Figure 3. NHS stop smoking services statistics on Successful Quitters at 4 Weeks, 1999-2005

According to these statistics, between 39 and 57% of those who set quit dates self report as successful quitters at 4 weeks. Moreover, it appears that the short term success rate of the services has increased over time – with smokers entering the services in 2004/05 8% more likely on average to self-report as quitters at 4 weeks than those who entered the services in 1999/2000. However, the percentage of successful quitters at 4 weeks, where CO validation has been conducted, has remained relatively stable at approximately 35% since 2001. Given that not all 4 week quitters are CO validated, the actual CO validated quit rate at 4 weeks may be higher than this figure reflects. Indeed, one external evaluation of the short term success of the services (K. Judge et al., 2005) (rating 2++), focusing on two contrasting areas of England (Nottingham and North Cumbria) where CO validation was systematically conducted, reports a 53% success rate based on CO validation (with a success rate of 60.7% based on self report).

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5 A successful quitter is defined as someone who has not smoked at all from two weeks after their initial quit date.

6 This number does not actually represent the number of people setting quit dates but rather quit dates themselves; one person can set a quit date more than once in a year and the date will be counted twice.

7 CO validation is recommended by the Department of Health but not required. Therefore, while smokers who go through the specialist services are almost universally CO validated, not all of the successful quitters at 4 weeks who go through the intermediate services are.

8 The authors note that the services were better established in the two study areas which improved follow up rates, rather than reflecting real differences in quit rates across regions.
Table 2. Short term self-reported quit rate success distributions at the PCT level

<table>
<thead>
<tr>
<th>Year</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Coefficient of Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004/2005</td>
<td>32</td>
<td>98</td>
<td>56</td>
<td>not available</td>
</tr>
<tr>
<td>2003/2004</td>
<td>34</td>
<td>90</td>
<td>57</td>
<td>19.51</td>
</tr>
<tr>
<td>2002/2003</td>
<td>27</td>
<td>96</td>
<td>53</td>
<td>19.42</td>
</tr>
<tr>
<td>2001/2002*</td>
<td>27</td>
<td>77</td>
<td>53</td>
<td>21.87</td>
</tr>
<tr>
<td>2000/2001*</td>
<td>36</td>
<td>79</td>
<td>49</td>
<td>not available</td>
</tr>
<tr>
<td>1999/2000*</td>
<td>24</td>
<td>79</td>
<td>39</td>
<td>not available</td>
</tr>
</tbody>
</table>

Although the services are reasonably successful in the short term, there is considerable variation in short term success from one individual service to another. As is evident from table 4.12, some PCTs report extremely high success rates (between 75-100%) while other PCTs report that less than one third of their smokers successfully quit at 4 weeks. This level of variation has been evident since the inception of the services and seems to be due in part to differences in the ways that quitting success is measured between PCTs. In at least some cases it is apparent that PCTs with extremely high success rates far in excess of the national average are using very inclusive criteria to measure quitting success, leading to artificially high quit rates that do not accurately reflect the ‘real’ number of quitters (see section 4.3.1 for further discussion of this issue). This raises a number of questions about the validity of the available evidence and these statistics should therefore be treated with some caution.

Strength and applicability of evidence

Overall, six 3- reports and one 2++ study provide evidence that intensive interventions for smoking cessation through the NHS Stop Smoking Services appear to be effective in the short term; on average over half of the clients setting quit dates through the services self-report as quit at 4 weeks. However, these statistics should be treated with some caution as it appears that PCTs are using different baselines to measure success.

As all seven studies took place within the English smoking cessation services, they are directly applicable to the target population.

4.1.2 Long Term Success

Although the Department of Health recommends the collection of statistics on the long term (one year) success of quitters, measuring long term cessation rates is difficult: as more time lapses the number of clients lost to follow up increases substantially (J. Ferguson et al., 2005). Therefore, collecting these statistics is both labour and resource intensive. However, there are a few available statistics on long term follow up (see table 3). One early DH bulletin (DH, 2001b) (rating 3-) on the services discusses one year outcomes, but as the services expanded it became unfeasible for most stop smoking services to collect this data, and the requirement was dropped, although a few local services have attempted to follow up quitters beyond one year (North Derbyshire Stop Smoking Service, 2005; A. Jones et al., 2005; A. Watt et al., 2005; S. Smith, 2006).
### Table 3. Long-term quit rates for UK smoking cessation services

<table>
<thead>
<tr>
<th>Reference Quality</th>
<th>Region</th>
<th>Clients who were followed up</th>
<th># of clients followed up</th>
<th>% lost to follow up</th>
<th>% of quitters at 52 weeks, self report</th>
<th>% of quitters at 52 weeks, CO validated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watt et al., 2005</td>
<td>Stop Smoking Services in Cornwall &amp; the Isles of Scilly</td>
<td>Those attending services between May 2003-April 2004</td>
<td>551</td>
<td>- quota sampled</td>
<td>23.4%</td>
<td>CO validation was not conducted</td>
</tr>
<tr>
<td>Smith, 2006</td>
<td>Blackpool, Fylde &amp; Wyre NHS Stop Smoking Service</td>
<td>2003-2004</td>
<td>500</td>
<td>59.2%</td>
<td>16.8%</td>
<td>CO validation was not conducted</td>
</tr>
<tr>
<td>Jones et al., 2005</td>
<td>Kingston &amp; Richmond Stop Smoking Service</td>
<td>Those attending service between April 2002-March 2003</td>
<td>370</td>
<td>58%</td>
<td>19%</td>
<td>CO validation was not conducted</td>
</tr>
<tr>
<td>Ferguson et al., 2005</td>
<td>Nottingham and North Cumbria (covering 9 PCTs)</td>
<td>October 2001-March 2003</td>
<td>2069</td>
<td>37.5%</td>
<td>17.7%</td>
<td>14.6%</td>
</tr>
<tr>
<td>DH, 2001c</td>
<td>All HAZs</td>
<td>Those attending service between April 1999-March 2001</td>
<td>2850</td>
<td>18%</td>
<td>13%</td>
<td>CO validation was not conducted</td>
</tr>
</tbody>
</table>

According to the Department of Health Statistical Bulletin from 2000/2001 (DH, 2001a) (rating 3-), the proportion of successful quitters at 52 weeks, based on self-report, was 13%. However, they note that this figure is likely to have been affected by the high percentage of clients lost to follow-up. These findings are echoed in the external evaluation of the services (J. Ferguson et al., 2005) (2005) (rating 2++). The researchers found a one year success rate of 17.7% based on self report, although only 14.6% were CO validated as successful quitters at 52 weeks (there were 44.7% non-quitters with a further 37.5% lost to follow-up). However, they note that when CO validated quitters at 4 weeks were separated from the self-reported quitters, 25.2% remained abstinent at 52 weeks.

The researchers asked smokers who had relapsed to identify when they had started smoking again. Of the 83% who responded, 39% had relapsed between 1 and 3 months following the 4 week quit date, 29% had relapsed between 4-6 months, 17% between 7-9 months and 15% between 10-12 months. Thus, more than two thirds of those who started smoking again relapsed within 6 months of treatment ending. Local stop smoking services that have conducted long-term follow up report slightly higher success rates of between 17-23%; however, these rates are based on self reported quitting success only. Moreover, their findings are also compromised by extremely high rates of loss to follow up (between 42-58%).
These findings indicate that between 77-87% of those who have successfully quit at 4 weeks through the NHS Stop Smoking Services will have relapsed by one year. These results are broadly consistent with a meta-analysis conducted in 1998 that suggests that about two thirds of quitters at 6 week follow up will have relapsed by 52 weeks (see J. Ferguson et al. 2005 for a discussion).

<table>
<thead>
<tr>
<th>No. 2</th>
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</thead>
<tbody>
<tr>
<td><strong>Strength and applicability of evidence</strong></td>
</tr>
</tbody>
</table>

Overall, one 3- report, one 2- study, two 2+ studies and one 2++ study provide evidence that intensive interventions for smoking cessation through the NHS stop smoking services appear to be reasonably effective in the long term. On average between 13-23% of the clients who self-report as successful quitters at 4 weeks through the services self-report as abstinent at 52 weeks – a long term success rate that is broadly consistent with international findings.

As all studies took place within the English smoking cessation services, they are directly applicable to the target population.

### 4.2 What internal factors may have influenced the effectiveness of the NHS stop smoking services?

There are a variety of internal factors that may influence the effectiveness of intensive interventions for smoking cessation delivered through the NHS stop smoking services. Five factors were highlighted as potentially impacting the effectiveness of interventions: content, delivery, deliverer, setting and intensity and each will be considered in turn. Evidence statements have only been provided in those areas where available studies allow conclusions to be drawn.

#### 4.2.1 What is the content of the intervention and how does it influence effectiveness?

In theory, the stop smoking services have all adopted variations on the Maudsley model (P. Hajek, 1989). This model represents the gold standard for evidence-based practice (M. Raw et al., 1998; R. West et al., 2000) and entails structured withdrawal oriented behavioural group therapy for smokers utilising nicotine replacement therapy (NRT) and/or bupropion. Nevertheless, there is evidence that some services have deviated significantly from the Maudsley model (L. Moore et al., 2003).

**Intermediate interventions**

Although the formal distinction between intermediate and intensive interventions was collapsed in April 2001, the interventions delivered in pharmacies and primary care settings by community advisors often differ substantially in content to the intensive

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9 Important questions have been raised about the ways that quitting at 12 months is defined (A. Watt et al., 2005). According to the present Department of Health definition, “a client should be regarded as a non-smoker at 52 weeks if they have not smoked at any time since 2 weeks after their original quit date” (A. Watt et al., 2005). However, some services feel this definition is overly restrictive and have been defining successful long term quitters in the following way:

1. someone who claims to have successfully quit smoking but still admits to smoking the occasional cigarette in social situations
2. someone who stopped smoking for three months, who smoked again for six months and then quit again for three
3. someone who made repeated attempts to quit in the early stages, eventually stopping ‘for good’, not having smoked for nine months (A. Watt et al., 2005).
Smoking Cessation Programme

interventions delivered by the core advisors. There are few available studies which
disaggregate the cessation rates of ‘intermediate’ and intensive interventions,
although two early DH bulletins (DH, 2001b; DH, 2001a) (rating 3-) disaggregate this
data. These bulletins found that intermediate services had a success rate at 4 weeks
of between 34-45% based on self-report. However, as the services have developed
considerably since 2001, these results do not necessarily reflect the outcomes
currently being achieved by these types of interventions.

<table>
<thead>
<tr>
<th>No. 3</th>
</tr>
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</table>

Strength and applicability of evidence

Evidence from two 3- bulletins indicates that intermediate interventions delivered by
community advisors achieve self-reported cessation rates of between 34-45% at 4
weeks – although these results do not necessarily reflect the outcomes currently
being achieved these inventions given the substantial development of the services
since 2001.

As these studies took place within English smoking cessation services, they are
directly relevant to the target population.

• Pharmacy interventions

Pharmacies have been incorporated into the stop smoking services since their
inception. It has been recognised that pharmacists are in an excellent position to
reach a wide variety of smokers, particularly those people who are not interested in
attending interventions through the core services. Moreover, many pharmacists are
able to prescribe NRT and bupropion directly under the Patient Group Direction
(PGD) scheme\(^\text{10}\), which helps to streamline service delivery.

There is very little available research on pharmacy-based smoking cessation (L.
Bauld et al. 2006). A recent Cochrane Review conducted by H.K. Sinclair et al.
(2004) (rating 1++) which focused on two UK trials found that trained community
pharmacists providing a counselling and record keeping support programme may
have a positive effect on smoking cessation rates. However, only one of the trials
showed a statistically significant effect. The review concludes that training health
professionals in smoking cessation counselling has a measurable effect on
professional performance, but there is no strong evidence that it changes clients’
smoking behaviour.

Although more research is clearly needed in this area, a more recent study on the
smoking cessation services in Glasgow (L. Bauld et al. 2006) (rating 2++) provides
further evidence that pharmacy services may be effective in facilitating smoking
cessation. In their report on the outcomes achieved through the Starting Fresh
service\(^\text{11}\), L. Bauld et al. (2006) found that pharmacy services produced CO-validated
cessation rates of around 20% at 4 weeks, and the researchers indicate that these
kinds of cessation rates are what might be expected of the relatively ‘brief’

\(^\text{10}\) A PGD is a local mechanism which is normally set up to allow for the supply of prescription
only medicine on the NHS by health professionals who do not have prescribing rights. In the
context of smoking cessation interventions, this scheme supports pharmacists to supply NRT
and prevents smokers from having to make unnecessary visits to GP practices in order to

\(^\text{11}\) Starting Fresh is a network of accredited community pharmacists across greater Glasgow
who aim to offer an accessible, cost-effective cessation service by means of weekly
behavioural support and access to NRT (Bauld et al. 2006).
interventions provided by pharmacists – which produce small numbers of quitters in the long term. However, although long-term quit rates may be quite low, pharmacy based services could prove to be very cost effective. In Glasgow, for example, pharmacies have succeeded in providing a high volume of services (treating 13,000 smokers in 2004), reaching a far larger number of smokers than specialist services (L. Bauld et al. 2006). Moreover, pharmacies may be located in disadvantaged neighbourhoods and may be more accessible to local smokers than core services. Therefore, pharmacy-delivered interventions have the potential to reach and treat large numbers of smokers (L. Bauld et al. 2006).

**No. 4**

**Strength and applicability of evidence**

Evidence from a 1++ structured review indicates that pharmacy-delivered interventions may have a positive effect on smoking cessation rates. This finding is confirmed in a recent 2++ study which reports that pharmacy-delivered interventions in Glasgow produce 4 week CO-validated quit rates of approximately 20%. The study also indicates that pharmacy-delivered interventions have the potential to reach and treat large numbers of smokers – especially those from disadvantaged areas. As these studies took place within UK smoking cessation services, they are directly relevant to the target population.

4.2.2 How does the way that the intervention is carried out influence effectiveness?

**Group vs. One-on-One Interventions**

Although the Maudsley model is ideally implemented in groups, community advisors provide one-to-one treatment and many of the core services have increasingly moved towards this model of delivery. However, two recent studies (K. Judge et al., 2005; A. McEwan et al., 2005) indicate that group treatment for smoking cessation may be more effective than one-to-one treatment.

In their evaluation of the NHS smoking cessation services, K. Judge et al. (2005) (rating 2++) found that although the vast majority of users received one-to-one support, group counselling substantially improved (odds ratio 1.38) CO-validated quit rates. A. McEwan et al. (2005) (rating 2++) in their study of specialist group treatment for smoking cessation vs. one-to-one treatment in primary care, similarly found that the group treatment was more successful: 30% of clients receiving group and 19% of clients receiving one-to-one treatment were CO-validated as continuously abstinent at 4 weeks (odds ratio 2.27).

However, clients express a clear preference for one-to-one treatment (L. Bauld et al., 2005). Many clients are reluctant to discuss their smoking in a group setting and others find the flexibility provided by one-to-one treatment attractive (group sessions require a regular and ongoing commitment, given that they are held at the same time every week). Moreover, in some contexts (particularly rural areas), group treatment is simply unfeasible. Overall, given that one-to-one treatment is effective (if less effective than group treatment) and examples of high quality and innovative one-to-one services exist, it is a crucial component of the NHS stop smoking services, not

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12 It is presently unclear whether Maudsley one-on-one interventions can claim the same evidence-base as the classical Maudsley model.

13 For example, Help2Quit (H2Q) in Shropshire. This service was established in 1995, aiming to make smoking cessation support a routine part of clinical practice. The service is delivered
least because it is important to offer smokers intending to quit a choice of treatment options.

**No. 5**

**Strength and applicability of evidence**

Overall, two studies provide a body of 2++ evidence that group interventions may produce higher CO-validated quit rates at 4 weeks than one-on-one interventions. However, one-to-one interventions are also effective and many clients express a clear preference for one-to-one treatment. Moreover, in some contexts (particularly rural areas), group treatment is simply unfeasible. Therefore, one-to-one interventions are a crucial component of the NHS stop smoking services as smokers need to be given a choice of treatment options.

As both studies all took place within the English smoking cessation services, they are directly applicable to the target population.

**Buddy Interventions**

A number of NHS stop smoking services are experimenting with ‘buddy’ interventions, where individual smokers partner up with a ‘buddy’ who is given special responsibility in helping them to quit (S. May et al., 2006). However, their effectiveness seems to vary depending on the context of treatment. One study (R. West et al. 1998) (rating 1++) compared the effectiveness of ‘solo’ and ‘buddy’ conditions in a 4 week intervention which included weekly individual counselling and the offer of NRT at a general practice clinic. The researchers found that the odds of patients in the buddy condition remaining abstinent (based on CO validation) after 4 weeks were 2.6 times those of solo patients. The authors conclude that a buddy system can provide an effective element of a smoking cessation intervention at minimal cost. However, a recent study (S. May et al., 2006) (rating 1++) found that buddy interventions do not increase the effectiveness of group smoking cessation interventions. They found that although buddy systems provide a low cost addition to group treatment programmes they do not substantially add to CO-validated 4 week success rates.

by health professionals based in primary care settings. Every GP in Shropshire participates in the service and H2Q also has specialist nurses working in hospitals. Although people can self refer to the service, in many cases GPs refer smokers to the H2Q nurse in the practice who provides both counselling and NRT over a three month period. More recently the service has developed a mobile clinic which visits workplaces and offers confidential weekly support ([http://www.shropshire.gov.uk/help2quit.nsf](http://www.shropshire.gov.uk/help2quit.nsf)). This service appears to have been particularly successful in addressing inequalities in health is successful in reaching smokers from the most deprived areas, although their 4-week quit rate is lower than those from more affluent areas (Help2Quit, 2005).
No. 6

**Strength and applicability of evidence**

Evidence from two 1++ studies suggests that while buddy systems more than double the CO-validated 4 week effectiveness of one-to-one interventions, they do not substantially increase the effectiveness of group interventions for smoking cessation. As both studies took place within the English smoking cessation services, they are directly applicable to the target population.

4.2.3 Does the effectiveness depend on the job title/position of the deliverer (leader)?

*What are the significant features of an effective deliverer (leader)?*

No studies were identified in the literature search that address whether the effectiveness of intensive smoking cessation interventions delivered in the NHS depends on the job title or position of the deliverer. However, anecdotal evidence indicates that the position of the deliverer does not generally influence the effectiveness of interventions (with the possible exception of interventions aimed at South Asians – see section 4.5) and that their level of training and interpersonal skills are far more significant.

In 2005 the Health Development Agency produced a document entitled *Skills and competencies framework for trainers of smoking cessation treatment* which outlined core skills and competencies. However, while this framework appears to have been implemented to varying degrees around the country, no UK-based studies were identified in the literature search that outlined findings on the significant features of an effective deliverer except in the context of interventions aimed at pregnant women – these will be discussed in section 4.6.

4.2.4 Does the site/setting of delivery of the intervention influence effectiveness?

*All settings*

Many PCTs run their specialist service in a wide range of settings aside from fixed clinics (e.g. intensive groups run in community centres, libraries, bingo halls, GP practices, etc) in order to be as accessible to the public as possible (L. Bauld et al., 2005). There are no available UK studies which explore whether these settings independently influence the effectiveness of the intervention being delivered. However, the results of L. Bauld et al.’s (2006) evaluation of the stop smoking services in Glasgow do indicate that the setting might indirectly influence the effectiveness of the interventions delivered.

L. Bauld et al. (2006) (rating 2++) found that although the type of treatment provided to smokers in Glasgow by LHCCs (Local Health Care Co-operatives) was broadly consistent from one LHCC to the next, the one element that differed significant was the location of treatment. They conclude that “the manner in which local groups are organised and possibly factors such as the quality of facilitation can affect outcomes, even when a similar model of service is being delivered” (L. Bauld et al., 2006). It is therefore possible that the location of treatment might affect the way in which smoking cessation coordinators organise the sessions and therefore indirectly influence the effectiveness of the interventions delivered. However, the evidence on this topic remains inconclusive.

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14 The Scottish equivalent to PCTs at the time of the study.
Strength and applicability of evidence

Information on the effect of the site/setting on service the effective of smoking cessation interventions is limited. Evidence from a 2++ study indicates that the location of treatment may indirectly influence the effectiveness of smoking cessation interventions.

As this study took place within the UK smoking cessation services, it is directly applicable to the target population.

Secondary care inpatient settings

At present the stop smoking services have not focused on conducting intensive smoking cessation interventions amongst inpatients. As L. Bauld and V. Williams (2006) note, “In many parts of the UK secondary care services have been slow to develop and the links between hospital and community provision have been limited...”. However, this is a setting where intensive interventions might be practically and successfully implemented – especially once the NHS in England goes smoke free at the end of 2006 (L. Neubeck, 2006) and there is presently a great deal of interest in developing inpatient interventions in hospitals within the NHS stop smoking services.15

Following an admission to hospital, individuals may be more open to help in quitting smoking – especially if they require treatment for a smoking-related illness. People may also find it easier to quit in an environment where smoking is prohibited or heavily restricted (N. A. Rigotti et al., 2002). Therefore, international evidence is provided on the effectiveness of smoking cessation interventions in inpatient settings.

One structured review (N. A. Rigotti et al., 2002) (rating 1++) has found that intensive interventions (inpatient contact plus follow-up for at least one month) conducted by physicians in various international settings are associated with a significantly higher quit rate compared to controls (Peto Odds Ratio 1.82, 95% CI). One structured review (V. H. Rice & L. F. Stead, 2004) (rating 1++) of nurse delivered intensive interventions found some evidence (although limited) that hospital-delivered interventions are also associated with a modest positive increase in smoking cessation.

Table 4. Studies on inpatient smoking cessation interventions

<table>
<thead>
<tr>
<th>Reference</th>
<th>Quality rating</th>
<th>Country</th>
<th>Nature of Intervention</th>
<th>Target</th>
<th>How intervention was delivered – and by who</th>
<th>What effect did the intervention have</th>
<th>When assessed &amp; how</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chouinard &amp; Robichaud-Ekstrand, 2005</td>
<td>++</td>
<td>Canada</td>
<td>1) Inpatient counselling with telephone follow-up, 2) inpatient counselling, 3) usual care</td>
<td>Patients with CVD</td>
<td>Inpatient intervention consisted of a 1-hr counselling session delivered by a nurse. The telephone follow-up included 6 calls during the first two months after discharge</td>
<td>Those who received inpatient smoking cessation intervention were 1.56X more likely to be abstinent than those receiving usual care. Participants who received the intervention plus telephone follow up</td>
<td>Six months following discharge from hospital – CO validation and/or urine sample</td>
</tr>
</tbody>
</table>

15 One PCT that appears to have had recent success in implementing in-patient interventions in primary care settings is Bolton PCT. Intermediate interventions in this setting have produced 4 week quit rates of between 40-50% (G. Bickerstaffe, 2006). See Appendix
<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Type of Intervention</th>
<th>Target Group</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nagle et al. 2005</td>
<td>Australia</td>
<td>Brief intervention incorporating: tailored information, assessment of withdrawal, offer of NRT, booklets &amp; discharge letter.</td>
<td>N/A</td>
<td>Inpatient intervention consisted of the delivery of brief opportunistic advice by a nurse, placement of a smoking cessation manual at the nurses’ station on each ward, inclusion of NRT in hospital pharmacy. The intervention did not significantly increase smoking cessation rates compared with the control group. Three and twelve month follow up with CO and salivary cotinine validation.</td>
</tr>
<tr>
<td>Froelicher et al. 2004</td>
<td>USA</td>
<td>Behavioural intervention and post-discharge telephone follow up with offer of NRT</td>
<td>Female patients with CVD</td>
<td>Inpatient intervention consisted of brief physician counselling plus nurse managed, cognitive behavioural, relapse prevention intervention. 5 Structured telephone contacts 2-90 days after discharge and relapse management counselling as needed. The intervention did not significantly increase smoking cessation rates compared with the control group. Twelve month follow-up verified by cotinine validation.</td>
</tr>
<tr>
<td>Quist-Paulsen &amp; Gallefos 2003</td>
<td>Norway</td>
<td>Brief intervention where booklet was provided with telephone follow-up following discharge.</td>
<td>Patients with CHD</td>
<td>Nurse provided patient with 17 page booklet on effects of smoking and risk reduction for CHD patients following cessation. Patients were advised not to smoke during hospital stay &amp; encouraged to use NRT. Nurses contacted participants via phone 2 days, one week, three weeks, three months, and five months after discharge. The intervention increased smoking cessation rates in the long term (57% of patients in the intervention group and 37% in the control group had quit smoking). However, the study shows that smoking cessation programmes of short duration are ineffective in preventing relapse. Twelve months following discharge from hospital. Urinary validation undertaken.</td>
</tr>
<tr>
<td>Hand et al. 2002</td>
<td>U.K.</td>
<td>Intervention where patients attended counselling sessions with smoking cessation counsellor and received NRT</td>
<td>N/A</td>
<td>Interventions were delivered by a smoking cessation counsellor who provided 4 weekly sessions. At 1 month patient was asked to attend the hospital, at 2, 5 &amp; 9 months the patient was contacted by phone or letter to encourage and support. At 3, 6, and 12 months the patient was contacted and seen by the counsellor. NRT did not add to the smoking cessation rate achieved at one year by regular advice and support despite significantly increasing the cessation rate at one week. One, three, six and twelve month follow-up with CO validation.</td>
</tr>
</tbody>
</table>
More recent studies on inpatient interventions have produced mixed results (see table 4.2). A study by A. Nagle et al. (2005) (rating 1++) found that a brief nurse-led intervention for hospitalised patients did not significantly effect smoking cessation rates – results that were echoed in a study by E.S. Froelicher et al. (2004) (rating 1++), which focused on an intervention for hospitalised women with cardiovascular disease. In contrast, a similar study by M.C. Chouinard & E.S. Robichaud-Ekstrand (2005) (rating 1++) focusing on patients with cardiovascular disease recorded a significant intervention effect – although they only followed up patients for six months, whereas E.S. Froelicher et al. (2004) followed up patients for one year.\(^{16}\)

It appears that telephone follow-up increases the success of interventions – a factor apparent in M.C. Chouinard & E.S. Robichaud-Ekstrand’s (2005) study. A. Nagle et al. (2005) did not conduct any telephone follow-up at all, which makes their results difficult to compare with the other studies. P. Quist-Paulsen and F. Gallefos’ (2003) study (rating 1++) shows that longer term telephone contact is more effective than short term follow-up and they emphasise that smoking cessation programmes of short duration are ineffective in preventing smoking relapse.

While less directly relevant, S. Hand et al’s (2002) (quality 1+) study has been included because it is the only one that takes place within a UK setting. The goal of the study was to determine whether NRT increases the effectiveness of inpatient smoking cessation interventions, but it provides an example of a particularly intensive intervention where contact was maintained with patients for an extended period following discharge. This study found that NRT did not increase the effectiveness of the smoking cessation intervention\(^{17}\) and for both the intervention and control group the percentage of quitters at one year was approximately 14% – which is in line with the quit rates found at one year follow up for the smoking cessation services more generally (see section 4.1.2).

The structured reviews and newer studies highlight that inpatient interventions appear to be more successful when they consist of three primary components:

1) in-patient advice and counselling
2) the provision of NRT
3) extended post discharge proactive telephone follow up support.

L. Wolfenden et al. (2003) recommend the following steps for in-patient cessation interventions.

\(^{16}\) Although the authors of the study do not disaggregate the results of their studies by sex, given the lower success rates reported in E.S. Froelicher et al.’s (2004) study of female patients, this appears to be a significant oversight, as it is likely that male and female inpatients have different success rates.

\(^{17}\) S. Hand et al. (2002) nevertheless point out that NRT may help smokers to achieve their first quit attempt and that it would be presumptive to conclude that NRT has no place in hospital patients with smoking-related diseases. The Cochrane review on the effectiveness of smoking cessation interventions for hospitalised patients (N.A. Rigotti et al. 2002) found that although the contribution that NRT makes to the effect of hospital interventions is impossible to determine, the data does support the usefulness of NRT in appropriate patients during and following hospitalisation.
1. In-patient Advice and Counselling

1.1 Assessment of Patient Smoking Behaviour (health professionals)
- Develop strategies to routinely assess and document patient smoking status
- Reported non smoking should be verified with a patient family member or friend, or using a bogus pipeline procedure if the patient has been admitted for a smoking related disease

Non-smokers

1.2 Advising patients to quit smoking (all health professionals)
- Provide strong, clear advice to quit
- Advise of hospital smoke free policy (if applicable)
- Review with patients the benefits of quitting and the adverse consequences of continuing to smoke
- Assess interest in quitting and nicotine dependence

1.3 Encouraging cessation for patients not interested in quitting (nursing staff)
- Provide a motivational intervention, promoting patient autonomy and supporting patient self efficacy
- Discuss the personal relevance of cessation and the risks of continued tobacco use
- Correct inaccurate beliefs and perceptions
- Identify strategies to overcome cessation barriers

1.4 Assisting patients interested in cessation
- Reinforce the patient’s decision to quit
- Identify strategies to remain abstinent during ‘high risk’ situations during hospitalisation and after discharge
- Establish inpatient social support from hospital staff
- Encourage the patient to seek social support from family, friends and work colleagues
- Provide basic self help material

1.5 Reducing relapse in patients who have recently quit
- Reinforce the patient’s decision to quit
- Review the benefits of quitting
- Address patient difficulties with remaining abstinent
- Consider appropriate strategies in 1.4 if have very recently quit

All smokers & ex-smokers

3. Post discharge follow up
- Contact patient via telephone during the first week after discharge and periodically (>4) over 3 months (nursing or clerical staff)
- During the telephone contact:
  - Emphasise the importance of cessation and communicate support for a quit attempt
  - Congratulate abstinent patients and discuss methods to avoid relapse
  - For patients who have relapsed, encourage another quit attempt, and identify strategies to avoid future relapse
  - Recommend pharmacotherapy for dependent patients
  - Monitor drug compliance, dosage and duration for patients using pharmacotherapy
  - Other details of community cessation services
Given the steady decrease in the length of hospital stays over the last decade, post-discharge follow-up appears to be crucial as most patients are in the hospital for less than one week. E.K. France et al. (2001) recommend that for planned hospitalisations like elective surgery, pre-hospitalisation interventions may be efficacious in improving cessation rates. They also advise employing a dedicated hospital smoking cessation counsellor who can provide the interventions and follow up support via phone.

No. 8

Strength and applicability of evidence

Overall, two 1++ structured reviews provide strong evidence that smoking cessation interventions amongst inpatients can be effective in creating modest to substantial increases in CO-validated smoking cessation rates up to 12 months in this population. Findings from four more recent 1++ studies and one 1+ study are mixed; however, on the whole they indicate that interventions with at least two months post-discharge telephone follow up are more likely to be successful than programmes of short duration.

The majority of the studies took place outside of the UK in a wide range of countries, including Australia, Canada, the USA and Norway. However, it is likely that their findings are applicable to the UK, given the broad similarities in these populations.

4.2.5 Does the intensity (or length or frequency) of the intervention influence its effectiveness or duration of effect?

Group sessions – which tend to be more intensive (i.e. of a longer duration) than one-on-one sessions – appear to have a higher success rate (see section 4.2.2) than one-to-one interventions, which provides indicative evidence that intensity is positively correlated with effectiveness. However, two studies on the effectiveness of one-to-one interventions delivered through the NHS report seemingly contradictory findings on this issue.

In their review of the NHS stop smoking services, L. Bauld et al. (2003) (rating 2++) found that CO-validated 4 week quit rates were enhanced by the number of individual sessions in a complete treatment course. However, a recent RCT (P. Aveyard et al. in press) (rating 1++) on behavioural support for smoking cessation in the context of primary care has found that extra support is ineffective in this setting. Nevertheless, the authors stress that these results do not indicate that one brief visit following quit day should replace intensive group support interventions. Indeed, their findings indicate that the success of one-to-one interventions in primary care seems to be affected by whether clients feel externally motivated to maintain their quitting behaviour (e.g. through the existence of buddy support or a smoking-related health problem). They point out that it is possible that if primary care behavioural support is provided in a context where patients who fail will be held accountable in some way (e.g. they will be contacted or their fortunes have been linked with those of a ‘buddy’) then more intensive support may be more effective than minimal support. Although further research is needed in this area, it appears that intensity, in conjunction with other specific service characteristics, may influence the effectiveness of interventions.
Strength and applicability of evidence

A 2++ study suggests that more intensive one-to-one interventions achieve higher CO-validated success rates at 4 weeks than less intensive interventions. However, a 1++ RCT in a primary care setting suggests that intensity alone does not increase the effectiveness of one-to-one interventions in this setting. The findings of this study suggest that more intensive one-to-one interventions may be more effective if they are accompanied by external motivations or pressures to quit (such as ‘buddy’ support or smoking-related health problems).

As these studies took place within the English smoking cessation services, their findings are directly applicable to the target population.

4.3 What external factors may have influenced the effectiveness of the NHS stop smoking services?

There are a number of external factors relating to the broader context in which the NHS stop smoking services were developed which appear to have undermined their ability to operate effectively. Although there is a growing body of information on external factors such as the setting of targets and the level of support that service providers have received to date, it is impossible to quantify how these factors have affected service delivery and efficacy.

4.3.1 How does the setting of targets affect service provision?

In line with the recommendations from Smoking Kills, since the inception of the services, the Department of Health has set a series of rolling three year targets for PCTs. Between 2003 and 2006 a target of 800,000 successful quitters passing through the services was set. According to A. Hayes (2005), the overall quit target was allocated amongst PCTs according to population. Each PCT then decided whether to apportion their target equally over the three year period or apply their own weighted formula. However, the figures were cumulative: under-achievement in one year was added to the following year’s target. Because targets were not determined according to local smoking prevalence rates but were apportioned on a ‘per head’ of population basis, they were in effect set without any regard for the different character and needs of the communities being served (A. Hayes, 2005).

Despite the artificiality of the set targets, the introduction of the PCT annual performance star ratings in 2001 led to a great deal of pressure on the stop smoking services to reach these targets, as PCT star ratings were partly determined on the basis of successful 4 week quit rates. A. Hayes (2005) points out that while there was considerable advantage to being part of the star rating, which encouraged senior management to prioritise the services and ensured adequate funding, it has also caused problems. According to N. Willis et al. (2006), “this pressure has resulted in significant differences in clinical practice, reporting processes and adherence to the evidence base for smoking cessation across the service network. These differences have made it increasingly difficult to compare service results across the national network, evaluate clinical efficacy and demonstrate value for money.”

There are concerns that different outcomes are actually being compared on a ‘like for like’ basis (A. Hayes, 2005; L. Moore et al., 2003). As A. Hayes (2005) points out, successful quits are defined as those who ‘quit smoking at the 4 week follow-up if
s/he has not smoked at all since two weeks after the quit date’. Moreover, in a number of cases these are self-assessments which can be reported by telephone rather than in person, as CO validation is recommended by the Department of Health, but is not compulsory.\(^\text{18}\)

It also appears that target setting has impeded the ability of the services to focus on the priority groups they are supposed to be targeting. As E. Pound et al. (2005) point out, from the beginning of the service, an inherent tension has existed between the need to meet throughput targets while also attracting priority groups to use services. To date, the efforts of stop smoking services have been focused almost exclusively on meeting the overall target numbers rather than attracting priority groups (R. West et al., 2003b). Thus, the setting of targets limits the level of effective service delivery that can be provided to priority groups who require more follow-up and more intensive treatment, because the targets are primarily concerned with the quantity of people accessing the services and setting quit dates, not long term cessation (A. Killoran et al., 2006; D. Wanless, 2004). According to the Wanless Report (2004) “…targets may skew local priorities, such as four-week smoking cessation targets, and may not lead to equity between different groups in society, when variations in health by geographical region, age, sex, socio-economic, or ethnic groups are not considered. Most importantly targets may be set at unattainable levels, and they can lead to inefficient use of resources when other important objectives are not explicitly targeted.”\(^\text{19}\)

Although target setting encouraged senior management to prioritise the services and ensured adequate funding in the early phase of service delivery, the pressure to meet targets has resulted in significant differences in reporting processes and there are concerns that different outcomes are actually being compared on a ‘like for like’ basis. It also appears that target setting has impeded the ability of the services to focus on the priority groups they are supposed to be targeting.

4.3.2 Has guidance to service providers been adequate to date?
National guidance on smoking cessation was published in 1998 (M. Raw et al., 1998) and updated in 2000 (R. West et al., 2000). Subsequent recommendations on how to meet Department of Health targets was also provided to both service providers (R. West et al., 2003a) and PCTs (R. West et al., 2003b). According to L. Bauld et al. (2005), the smoking cessation services developed in line with the evidence base and government guidelines and it appears that guidance to service providers was adequate in the initial phase of service delivery.

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\(^{18}\) It is partly for this reason that the DH statistical bulletins have received a 2- rating.

\(^{19}\) The focus on target setting in the smoking cessation services appears to have meant that more emphasis has been placed on this area than the other equally important components of tobacco control policy. As it has been recognised (D. Wanless, 2004) that smoking cessation services alone are unlikely to lead to a reduction in smoking prevalence, this is a potentially significant problem.
**Background Evidence**

The smoking cessation services developed in line with the evidence base and government guidelines and it appears that guidance to service providers was adequate in the initial phase of service delivery.

**4.3.3 What guidance or support would service providers most like to receive?**

Although guidance has been broadly adequate to date, it appears that service providers are interested in more up-to-date guidance and national guidelines. Since the initial service evaluations were conducted structural changes within the NHS and important policy developments such as the pending smoke-free legislation in England have meant that services are facing new challenges. C. Johnson & E. Croghan (2005) conducted a recent survey of smoking cessation coordinators in the West Midlands. Of the eighteen smoking cessation coordinators who responded to the survey, 31% indicated that more good practice sharing amongst the local stop smoking services was important, 26% indicated that they wanted (updated) national guidance on best practice, 21% indicated that they wanted (updated) national guidelines and 21% thought that 52 week quit data would be useful. Clearly, many of the smoking cessation coordinators feel that existing guidance does not adequately reflect the changed circumstances in which the services are now operating.

One of the key changes that has occurred since the services were first set up is the breakdown of the distinction between core and intermediate services. However, while smoking cessation has been increasingly delivered in the context of primary care, there has been little standardisation of primary health care service delivery. There are two areas that smoking cessation advisors have highlighted as problematic: training and payment models.

Overall, the quality of training that community advisors receive is mixed (HDA, 2003). For example, training programmes for pharmacists are fragmented and there is considerable variation in the amount and type of training they receive (NICE, 2005). In their evaluation of the Starting Fresh programme in Glasgow, L. Bauld et al. (2006) found that the level and consistency of training provided to pharmacists varied significantly from pharmacy to pharmacy. In some pharmacies all staff had undergone training, whereas in others only a minority of staff had been trained or were waiting to attend training. Furthermore, some pharmacists were trained during pharmacy visits by Nicorette representatives, as opposed to attending Health Board training sessions or completing an approved distance learning programme. Often the training was “cascaded”, with trained staff giving guidance to colleagues who had not attended formal training (with significant differences in the level of input provided to ‘informally’ trained staff). Finally, the intensity of the intervention provided often varied dramatically from pharmacy to pharmacy – in some cases as little as 30 seconds of counselling might be provided, or five minutes or more in others.

Second, different payment models are being used for pharmacy advisors (and GP practices) from one PCT to the next, with significant variation in the level of service pharmacies are expected to provide. For example, in some PCTs, pharmacies contracted to provide the service receive 20 pounds for each patient who enters the pharmacy smoking cessation programme and an additional 20 pounds for each patient who quits smoking for at least 4 weeks following the smoking cessation programme. Furthermore, a fee of 10 pounds is paid for self motivated quitters who quit for at least 4 weeks (M. Cornish, 2006). Alternatively, in Glasgow under the Starting Fresh scheme a more rigorous (and less financially lucrative) payment
model exists as all participating pharmacies receive 30 pounds per client for full completion of the 12 week programme (L. Bauld et al., 2006).

The lack of standardisation in training and payment models further exacerbates the problems with attempting to ascertain reliable estimates on the effectiveness of the stop smoking services. First, the interventions provided through the intermediate services are being treated as comparable with the interventions provided through the core services. Second, variations in payment models affect the willingness of pharmacies and GP to participate in service delivery. Third, although financial incentives are necessary to ensure that pharmacies and GP practices collaborate with stop smoking service providers, without compulsory CO validation such incentives seem likely to discourage these providers from undertaking thorough follow up. Thus, many smoking cessation coordinators have indicated that national guidance in these areas is crucial to standardising and improving the quality of the services.

| No. 12 |
| Background Evidence |
| Although guidance has been broadly adequate to date, structural changes within the NHS and important policy developments have created the need for further guidance. A standardised model of payment and training for primary care providers have been highlighted as particularly important. |

4.4. How does the effectiveness of stop smoking interventions vary with factors such as age, sex, level of addiction, previous quit attempts and history of quitting?

No studies were identified in the literature search that explored the effectiveness of stop smoking interventions for males and for females in relation to age, level of addiction, previous quit attempts and history of quitting. However, studies addressing a number of these individual factors were available.

4.4.1. Effectiveness of stop smoking interventions (by sex and age)

Setting a quit date
One Department of Health Statistical Bulletin (DH, 2004) (rating 3-) examines the relationship between sex and age in the numbers of males and females setting quit dates across time. Its findings are represented pictorially in figure 4.

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20 Although most studies explore the effectiveness of stop smoking interventions based on variables such as sex and age, invariably when factors such as level of addictedness and previous quit attempts are explored, the data are not sex-disaggregated. Given that there are likely to be important sex and gender differences between males and females in the intersections between level of addictedness, previous quit attempts and quitting success, this seems a significant oversight. Indeed, a failure to disaggregate quit rates by sex is apparent in a number of the studies discussed in this review.
According to the DH bulletin, over the life of the NHS Stop Smoking Services there has been a substantial increase in the number of males and females over 18 setting quit dates; however, females consistently set more quit dates than males. The most common age group to set quit dates is women between 18-34 followed by women between 45-49 and women between 35 and 44. The males who most commonly set quit dates are those who are middle aged, between 45-49, followed by much younger men between 18 and 34. The proportion of females and males under the ages of 18 setting quit dates is extremely low – and very similar.

However, smoking prevalence for males and females varies significantly depending on age. According to the Smoking Related Behaviour and Attitudes, 2004 survey (D. Lader & E. Goddard, 2005), smoking prevalence for males is inversely correlated with age. Thus, males between the ages of 18-34 have the highest smoking prevalence (between 31-33%) and men over 64 have a smoking prevalence of between 8-15% (see figure 5). The pattern is more complicated for females, and the highest smoking prevalence in women is seen in 45-54 year olds (28%), although women between the ages of 16 and 44 have a smoking prevalence between 25-26%. As figure 4 shows, while males under 35 have a significantly higher smoking prevalence than females under 35, women over 45 have a much higher smoking prevalence than men of the same age.
It is difficult to ascertain which male and female age-sets are under-accessing services based on these figures, as the prevalence data represents a proportion of the total population and the DH statistics do not reflect a rate of setting quit dates but rather raw numbers without context. However, based on these figures it seems likely that males and females under 18 are under-accessing the stop smoking services, as they have a high smoking prevalence but access the services in extremely low numbers.

No. 13

**Strength and applicability of evidence**

One 3- bulletin demonstrates that age and sex are both correlated with setting a quit date. Females are more likely to set quit dates than males and smokers under the age of 18 are far less likely to set quit dates than other age groups, although smoking prevalence is this age set is high.

As this study took place within the English smoking cessation services, it is directly applicable to the target population.

**Quitting success**

There is a clear relationship between quit status at 4 weeks and age, as younger smokers are less likely to quit. However, younger smokers tend to be lost to follow up at much higher rates than older smokers, which makes it difficult to accurately estimate quitting success (A. Baker et al., 2006).

According to the DH statistical bulletin (2004) (rating 3-), which also evaluates male and female quitting success in the services between 2001-2004, men appear to be slightly more successful at quitting (2% more successful) at 4 weeks, based on self-report, than women overall. K. Judge et al. (2005) (rating 2++), in their evaluation of the services, similarly found that female smokers were more likely to access treatment services but men were more likely to be CO-validated as successful.
quitters at 4 weeks.\textsuperscript{21} This finding was echoed in L. Bauld et al.’s (2006) (rating 2++) evaluation of the stop smoking services in Glasgow where they found that women were less likely to be CO-validated as successful quitters at 4 weeks than men (41% vs. 53%) although they constituted over two thirds of the clients accessing the services.\textsuperscript{22} A. Watt et al. (2005) (rating 2-) in their 52 week follow up of clients accessing the stop smoking services in Cornwall and the Isles of Scilly also found evidence of a higher self-reported success rate amongst male quitters than female quitters (31.8% and 15.1%, respectively).

These studies support international research findings that while women are highly motivated to quit smoking, men tend to be more successful at doing so (W. Bjornson & C. Rand, 1995). There are several factors that seem to explain the lower success rates of women such as lower levels of confidence in relation to quitting and differences in the meaning and role of tobacco in men and women’s lives (K. Judge et al., 2005; H. Graham, 1994; B. Jacobsen, 1981; B. Jacobsen, 1986; L. Greaves, 1996). For example, A. Watt et al. (2005) found that significantly more women cited stress and habit than men, who were more likely to cite enjoyment (D. Lader & E. Goddard, 2005).

\begin{table}[h]
\centering
\begin{tabular}{|l|}
\hline
No. 14
\hline
\textbf{Strength and applicability of evidence}
\hline
Two 2++ studies, one 2- study and one 3- study demonstrate that age and sex are both correlated with quitting success. Although females are more likely to set quit dates than males, they are less likely to be CO-validated as successful quitters at 4 weeks. Older smokers are more likely to quit successfully than younger smokers – although the high rates of loss to follow up among young smokers make it difficult to draw definitive conclusions on the relationship between age and quitting success.
\hline
As these studies took place within the UK smoking cessation services, they are directly applicable to the target population.
\hline
\end{tabular}
\end{table}

\textbf{4.4.2 Effectiveness of stop smoking interventions (based on level of addiction and previous quit attempts)}

Although information on a person’s level of addiction and history of quit attempts is not currently part of the minimum data set\textsuperscript{23} required by the Department of Health, two studies provide insights into the ways these factors influence the effectiveness of smoking cessation interventions delivered through the stop smoking services. K. Judge et al. (2005) (rating 2++) found that level of dependency and smoking behaviour influence quitting success. More heavily dependent smokers (those who smoke within five minutes of waking) were less likely to be successful in their quit attempt. They also found a negative association between previous quit attempts and successful CO-validated cessation at 4 weeks.

These findings are partly echoed in an evaluation of the Glasgow Stop Smoking Services (L. Bauld et al., 2006) (rating 2++) which found that smoking history and behaviour affect quit rates, with those smoking fewer than 10 cigarettes per day much more likely to be CO-validated quitters (61%) than those smoking 31 or more

\textsuperscript{21} A multivariate approach to the relationship between each dependent variable and case characteristics was adopted in this study to account for potential confounders.
\textsuperscript{22} A multivariate approach to the relationship between each dependent variable and case characteristics was also adopted in this study to account for potential confounders.
\textsuperscript{23} Some stop smoking services do appear to be collecting information on this.
Moreover, those who began smoking within five minutes of waking were also more likely to fail in their quit attempt than those who begin smoking later in the day. However, they found that having made at least one quit attempt in the previous year was positively associated with a successful quit attempt.

<table>
<thead>
<tr>
<th>No. 15</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strength and applicability of evidence</strong></td>
</tr>
<tr>
<td>Two 2++ studies demonstrate that level of addiction is inversely correlated with quitting success. Findings in relation to the connection between previous quit attempts and quitting success are less clear. One study reports a positive correlation between the two and another study reports a negative correlation between the two.</td>
</tr>
<tr>
<td>As these studies were conducted on the smoking cessation services in the UK, their results are directly applicable to the population under study.</td>
</tr>
</tbody>
</table>

4.5. **How does the effectiveness of stop smoking interventions vary with factors such as ethnicity?**

The evidence on the effectiveness of stop smoking interventions for minority ethnic groups is inconclusive. Although a body of indicative information about the smoking patterns of black and minority ethnic groups (BMEG) exists, there is little definitive evidence on how effective the stop smoking services are for ethnic minorities.

4.5.1 **How readily are members of BMEG accessing smoking cessation services?**

According to the Department of Health Statistical Bulletins (DH, 2005; DH, 2004; DH, 2003; DH, 2002; DH, 2001a) (rating 3-24), it is clear that the number of people from BMEG setting quit dates has increased dramatically since the inception of the services in 1999 (see table 5).

---

24 There are numerous difficulties with attempting to determine how effectively the NHS stop smoking services are reaching black and minority ethnic groups (BMEG). First, there are large gaps in the ethnicity data provided by the NHS stop smoking services. In virtually all of the annual statistics collected, the instances where ethnicity is not known equals or exceeds the cases where BMEG status was recorded (see table 5). Moreover, there are also problems with the broader statistics on smoking rates for BMEG (P. Aspinall & B. Jacobson, 2004; R. Bhopal et al., 2004), with marked inconsistencies across various surveys regarding the smoking status of ethnic minorities. These inconsistencies make it difficult to estimate with any certainty the actual smoking rate of BMEG (P. Aspinall & B. Jacobson, 2004). There is also evidence that smoking prevalence amongst BMEG is underreported, particularly among women further emphasizing the need for reporting of sex-disaggregated statistics.
Table 5. People setting a quit date, by ethnic group
England, 2000/01 to 2004/05

<table>
<thead>
<tr>
<th>Persons</th>
<th>2000/01</th>
<th>2001/02</th>
<th>2002/03</th>
<th>2003/04</th>
<th>2004/05</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>Total</td>
<td>132,544</td>
<td>100</td>
<td>227,335</td>
<td>100</td>
<td>234,858</td>
</tr>
<tr>
<td>White</td>
<td>121,752</td>
<td>92</td>
<td>214,059</td>
<td>94</td>
<td>221,234</td>
</tr>
<tr>
<td>Mixed</td>
<td>875</td>
<td>1</td>
<td>1,354</td>
<td>1</td>
<td>1,501</td>
</tr>
<tr>
<td>Asian</td>
<td>1,527</td>
<td>1</td>
<td>3,002</td>
<td>1</td>
<td>3,415</td>
</tr>
<tr>
<td>Black</td>
<td>1,072</td>
<td>1</td>
<td>1,948</td>
<td>1</td>
<td>2,102</td>
</tr>
<tr>
<td>Other</td>
<td>612</td>
<td>0</td>
<td>1,062</td>
<td>0</td>
<td>1,234</td>
</tr>
<tr>
<td>Unknown</td>
<td>3,966</td>
<td>5</td>
<td>3,403</td>
<td>3</td>
<td>3,076</td>
</tr>
</tbody>
</table>

Given that approximately 88% of England’s total population is described as ‘white’\(^{25}\), it appears that the services have been generally effective in reaching BMEG. However, the large proportion of cases in which ethnic status was not recorded and the fact that smoking rates amongst ethnic minorities vary dramatically, make it difficult to draw definitive conclusions about this issue.

There is some indicative evidence that there may be a lack of awareness of the health effects of smoking in BMEG (HDA, 2000; B. Williams et al., 2001) as well as a lack of knowledge about the range of available smoking cessation methods and services (B. Williams et al., 2001; K. Sehmi, 2005; S. Ashgar, 2001), which would seem to support the position that ethnic minorities are less likely to access the services than the white population. This may be partly explained by a common perception amongst BMEG that smoking aids are futile and will power is the main determinant of successfully quitting (HDA, 2000). South Asian participants, in particular, did not readily acknowledge the addictive quality of nicotine, preferring to see themselves as light smokers who could give up any time (HDA, 2000). One of the Bangladeshi participants in Croucher’s (2003) study reports, “I do not think it (NRT) will work for me… Its [sic] in my mind not in that patch. I would not spend money on something which does not guarantee me success”.

No. 16

**Strength and applicability of evidence**

The evidence on how readily black and minority ethnic groups are accessing the stop smoking services is inconclusive. Five 2- studies appear to demonstrate that black and minority groups on the whole are accessing stop smoking services in proportion with their representation within the total population; however, a high level of missing data undermines the conclusiveness of the available statistics. Moreover, indicative evidence raises some doubts about how readily BMEG are accessing NHS stop smoking services.

As these studies were conducted on the smoking cessation services in the UK, their results are directly applicable to the population under study.

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\(^{25}\)According to 2001 census figures, the white population of England (including Irish-born) was 88.2%.
4.5.2 How does ethnicity intersect with factors such as gender and class in relation to smoking and quit status?

Unlike smoking rates in the white population in England, which currently do not vary substantially by sex, the smoking rates of men and women from the same minority ethnic group tend to differ – often substantially (see figure 6). The greatest difference is seen in the self-reported smoking rates of Bangladeshi men and women (40% and 2%, respectively).

![Figure 6. Current cigarette smokers, by ethnic group](image)

(Reproduced from Health Survey for England 2004).

However, in all BMEG there is a gap between male and female smoking rates which appears to be largely attributable to cultural attitudes surrounding gender and smoking – this is particularly true for South Asian communities where the gap in male and female smoking prevalence is greatest.

According to J. Bush et al.’s (2003) qualitative study of attitudes towards smoking in the Pakistani and Bangladeshi communities, smoking in men is socially acceptable and associated with social bonding, tradition, and normative masculinity itself. In contrast, smoking amongst women is stigmatised and regarded as taboo (J. Bush et al., 2003); (S. Ashgar, 2001). It is regarded as a sign of disreputability and may also be associated with prostitution and ‘loose’ behaviour (HDA, 2000). However, it is worth noting that although the rates of smoking amongst BME females are low, the stigma surrounding smoking may also mean that it is underreported (P. Aspinall & B. Jacobson, 2004). Indeed, the prevalence of smoking in young BME women appears to be increasing – a trend that may be partly explained by westernisation and a desire to rebel against family and community constraints (J. Bush et al., 2003); (S. Ashgar, 2001). This view is supported by the fact that women who migrate to the UK have significantly lower odds of smoking cigarettes than those born in the country – a difference not found for men (H. Cooper et al., 2000).

Given that the self-reported smoking rates of BME females are uniformly lower than the rates of their male counterparts (see figure 7) it is therefore interesting that in virtually every ethnic group (except Asians) more females are setting quit dates than males. Indeed, taking into account the broad smoking prevalence rates in each
ethnic group by sex\textsuperscript{26}, the number of ethnic minority women setting quit dates far outweighs the number of males. For example, although approximately only 2-8\% of South Asian women smoke, according to the Department of Health statistical bulletins (DH, 2005; DH, 2004; DH, 2003; DH, 2002; DH, 2001a) (rating 3-) each year they have represented at least 22\% of the Asians accessing the service, indicating that they are proportionally accessing the service far more commonly than Asian men (see figure 7).\textsuperscript{27} This pattern echoes the pattern for white females, who seem to be more highly motivated to quit smoking than men (see section 4.4).

Unfortunately, quitting success rates at 4 weeks are not disaggregated on the basis of ethnicity and so it is impossible to ascertain whether ethnic minority females have similar rates of success to males.

\textbf{Figure 7. People setting a quit date, by minority ethnic group and sex between 2000-2005}

\textsuperscript{26} Based on the 2004 Health Survey for England figures
\textsuperscript{27} However, the ethnic group with the largest proportional increase in setting quit dates is Asian males. Since 2000 there has been a 6.5 fold increase in the number of Asian males setting quit dates through the NHS service.
However, it is worth pointing out that while smoking rates amongst minority ethnic women (especially Asian females) are reported to be low, rates of actual tobacco use may be higher. For example, amongst some South Asian communities women regularly chew tobacco – most commonly in the form of paan. Paan chewing is particularly prominent in the Bangladeshi community and is clearly a behaviour associated with women\(^{28}\) (19% of Bangladeshi men and 26% of women report chewing compared with between 2% and 6% of Indian and Pakistani men and women). Interestingly, although smoking is seen as culturally unacceptable for women, chewing may be viewed in a quite positive light – because of the way it seems to uphold a distinct ethnic identity. For example, according to one study (HDA, 2000) family members may be proud of female family members who chew paan. Moreover, people are not generally aware of the health risks of chewing; rather, the value of chewing as a cultural tradition appears to overshadow any potential concerns regarding its health risks (HDA, 2000).

### Background Evidence

There is no direct evidence on how minority ethnic status intersects with gender in relation to smoking and quit status in the context of interventions delivered through the stop smoking services. Background evidence indicates that females from BMEG appear to be less likely (significantly less likely in South Asian communities) to smoke than males. However, given the stigma that attaches to female smoking in many minority ethnic groups (especially South Asians), it is probable that smoking rates amongst minority ethnic females are underreported. Amongst Bangladeshi women in particular, although self-reported smoking prevalence is low, use of tobacco itself is very high (over 25%).

Although cigarette smoking in general tends to be correlated with socioeconomic disadvantage, smoking amongst minority ethnic groups is generally reported to be lower than the national average, especially for women (H. Cooper et al., 2000). However, amongst certain ethnic groups – notably Bangladeshi males – the smoking rate is reported to be considerably higher than the national average. Indeed, it appears that the very high reported smoking rates amongst Bangladeshi men can be largely explained by their levels of socioeconomic disadvantage relative to other South Asian Britons as there is a consistently high correlation between cigarette smoking and material deprivation for Bangladeshi adults aged sixteen and over\(^{29}\) (H. Cooper et al., 2000; HDA, 2000). In addition, J. Bush et al. (2003) found few differences in beliefs or attitudes between Bangladeshis and Pakistanis that might explain the significantly higher Bangladeshi level of smoking – which also supports the position that this difference stems from socio-economic factors rather than cultural influences per se. Therefore as the Health Development Agency (HDA, 2000) has cautioned, it is dangerous to assume that the distinct smoking patterns in various BME males can be explained only in terms of cultural and religious factors.

\(^{28}\) Chewing tobacco is associated with age and class as well as gender. According to R. Boreham (2000), amongst Bangladeshis, chewing prevalence increased with age and was higher in manual than in non-manual households (men: manual 22%, non-manual 12%; women: manual 26%, non-manual 17%).

\(^{29}\) However, this correlation between smoking status and social class is only evident amongst the Bangladeshi community. There is no clear association between social class or household income and cigarette smoking for Indian, Pakistani or Chinese men. Moreover, among South Asian women, the social class gradient is in the opposite direction, as cigarette smoking is more prevalent amongst non-manual women (R. Boreham, 2000).
Unlike the Indian and Pakistani communities, which have a long history of migration to the United Kingdom, the Bangladeshi community has been established more recently; and employment opportunities for Bangladeshi men tend to be concentrated in manual occupations that entail long working hours in unregulated environments (J. Bush et al., 2003). This factor may have an important role to play in the high smoking rates of Bangladeshi men. According to one study conducted by the HDA (2000), “A number of participants, particularly Bangladeshi men, saw smoking as a stress reliever. A large number of the Bangladeshi men worked in manual jobs and saw smoking as a distraction from the boredom and stress of their work”. Findings from focus groups conducted with BMEG (R. Croucher, 2003) support this. The Bangladeshi males who took part in the focus groups were predominantly manual labourers (most were restaurant workers) or unemployed. According to one male “English jobs or other jobs you can’t smoke and work. See the white men, they go tie and suit, blue collar job and everything, they will have no smoking environment”. Another participant noted, “Our people they work in restaurants and factories, it’s like a little club in there innit, you go in to smoke... I think I managed to give up... Then I came back to it, ‘cause I was working in Bengali working environment” (R. Croucher, 2003).

4.5.3 How successful are members of BMEG in quitting smoking?
At present there is a significant gap in our knowledge about the effectiveness of either individual or societal level smoking cessation interventions among racial and ethnic minorities (D. Lawrence et al., 2003). The evidence regarding the quitting success of BMEG is inconclusive and more research needs to be conducted to investigate the effectiveness of targeted versus generic interventions for different racial and ethnic minority populations (D. Lawrence et al., 2003).

Unfortunately, the DH statistical bulletins do not disaggregate 4 week quit rates by ethnicity and it is therefore impossible to determine with any certainty how successful people from BMEG are in actually quitting smoking. An equity profile conducted by the Northeast Public Health Observatory (NEPHO, 2005) (rating 2+) found that CO-validated quit outcome at 4 weeks did not vary with the broad ethnic categories of ‘white’ and ‘non-white’. However, they qualify this conclusion by stating that because the numbers of people setting quit dates from BMEG were small, which makes interpretation of the data difficult.

However, it is clear that stopping smoking appears to be a more recent phenomenon in minority ethnic groups than in the wider population (C. Brown, 2004). Aside from Chinese men, all other men from minority ethnic groups are less likely than men in the general population to have stopped smoking. Moreover, Pakistani and Bangladeshi men are the least likely to have stopped smoking, and only
approximately one in five men who have ever smoked regularly have given up (R. Boreham, 2000; HDA, 2000).

<table>
<thead>
<tr>
<th>No. 19</th>
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</thead>
<tbody>
<tr>
<td><strong>Strength and applicability of evidence</strong></td>
</tr>
<tr>
<td>The evidence on how successful black and minority ethnic groups are accessing the stop smoking services is inconclusive. One 2+ study found that CO-validated quitting success at 4 weeks did not vary by ethnicity. However, because of the small numbers of people from BMEG in the study, interpretation of their results is difficult.</td>
</tr>
<tr>
<td>As this study was conducted on the smoking cessation services in England, its results are directly applicable to the population under study.</td>
</tr>
</tbody>
</table>

4.5.4 How culturally appropriate are the NHS services?

The NHS services run a non-English language quitline that caters specifically to the South Asian community. There are also various projects that have been set up within a number of PCTs catering to communities containing a large proportion of ethnic minorities, as well as community based programmes and campaigns (e.g., the Pan London Ramadan campaign). However, it is fair to say that there are relatively few programmes overall that cater to ethnic minorities – in most cases people from these groups are incorporated into the broader NHS stop smoking services available. As D. Lawrence et al. (2003) in their study of smoking cessation interviews for minority populations in the United States note, although behavioural and pharmacological interventions have been successful in reducing smoking at an individual level, they have focused largely on majority populations.

Moreover, there is some evidence from Scotland that service providers often feel ill equipped to deal with ethnic minority smokers and unable to provide the necessary information and support in a culturally appropriate fashion (S. Ashgar, 2001). The respondents in this particular study emphasised a need for specifically designed material that takes into account the cultural aspects of smoking amongst BMEG (S. Ashgar, 2001). It is also clear that a number of ethnic minorities incur language difficulties when using health services (HDA, 2000) and information and support also need to be linguistically appropriate.

Some studies have indicated that for certain ethnic minorities – particularly Bangladeshi and Pakistani smokers – advice from a doctor may be more effective than interventions by other service providers (HEA, 1999). However, it appears that the ethnicity of the doctor is crucial, especially for members of the Indian community (HDA, 2000).

Overall, available evidence indicates that programmes tailored to ethnic minorities can reach success levels well beyond the average, for both men and women. For example, in one programme run by Tower Hamlets (see table 7) specifically aimed at the Bangladeshi community, success rates for the last three years have ranged between 63-68% - well above the national average (S. Begum, 2006).\(^\text{30}\)

\(^{30}\) However, it is interesting to note that Bangladeshi women in the Hamlet Towers project have been less successful in quitting smoking than men – despite their extremely high level of representation overall. Once again, this echoes broader findings within the literature than while women are highly motivated to quit smoking, they tend to be less successful in quitting than men.
Table 7. Tower Hamlets Bangladeshi Stop Tobacco Project 4 week CO validated quit rates, by gender

<table>
<thead>
<tr>
<th></th>
<th>2003/04</th>
<th>2004/05</th>
<th>2005/06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>120</td>
<td>118</td>
<td>177</td>
</tr>
<tr>
<td></td>
<td>79</td>
<td>68</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td>66%</td>
<td>58%</td>
<td>62%</td>
</tr>
<tr>
<td>Males</td>
<td>190</td>
<td>175</td>
<td>187</td>
</tr>
<tr>
<td></td>
<td>133</td>
<td>118</td>
<td>129</td>
</tr>
<tr>
<td></td>
<td>70%</td>
<td>67%</td>
<td>69%</td>
</tr>
<tr>
<td>Total</td>
<td>310</td>
<td>293</td>
<td>364</td>
</tr>
<tr>
<td></td>
<td>212</td>
<td>186</td>
<td>239</td>
</tr>
<tr>
<td></td>
<td>68%</td>
<td>63%</td>
<td>66%</td>
</tr>
</tbody>
</table>

Background Evidence

There is no direct evidence on how culturally appropriate the NHS stop smoking services are, although it seems to be the case that there are relatively few programmes overall that cater to ethnic minorities – in most cases people from these groups are incorporated into the broader NHS. However, it appears that smoking cessation interventions tailored for ethnic minorities can achieve high levels of success.

4.6 How effective have the NHS stop smoking services been in reaching pregnant smokers?

4.6.1 How successful are pregnant women in quitting smoking?

Five annual statistical bulletins (DH, 2004; DH, 2003; DH, 2002; DH, 2001a; DH, 2001b) (rating 3-) have been published by the Department of Health that evaluate how successful pregnant women have been in quitting smoking through the services. The findings of these statistical bulletins are graphically represented in figure 8. According to the DH statistical bulletins, it appears that the percentage of pregnant women who self-reported as successful quitters at 4 weeks between 1999 and 2004 was between 35-51% (see figure 8). This is significantly lower than the self-reported quit rate at 4 weeks for England as a whole during the same period[^31] (see section 4.1). Moreover, the percentage confirmed by CO validation is much smaller[^32] – between 24 and 28%. Given that it has been established that self report is not a reliable way of ascertaining current smoking status – especially where pregnant women are concerned (see 4.6.2) – it is likely that overall quit rates at 4 weeks are reasonably low.

[^31]: Although the proportion of pregnant women who successfully quit smoking at 4 weeks is lower than average, there is evidence that many of these ‘failed quitters’ do cut down on the amount that they smoke even though they do not necessarily give up altogether. This would indicate that although the effectiveness of interventions for pregnant women may be limited in terms of their ability to facilitate smoking cessation, they may, in conjunction with wider social pressures, encourage smoking reduction. Although there is currently no established position on whether smoking reduction in pregnancy reduces the risks to the foetus (J. Lumley et al., 2004), there is review evidence that limiting or interrupting exposure to smoking and nicotine (especially when considering heavy smokers) has the potential to reduce harm to both the woman and the foetus (L. Greaves et al., 2003). It is therefore probable that despite the low rates of cessation amongst pregnant smokers, their involvement in the NHS stop smoking services has some positive health benefits. Indeed, a more accurate way of measuring the success of interventions might be to measure the level of CO in the system, rather than merely its presence or absence.

[^32]: A number of the pregnant quitters were not CO validated, so this should not be taken as an accurate reflection of how many pregnant women actually quit smoking at 4 weeks.
The evaluation of the NHS stop smoking services by K. Judge et al. (2005) (rating 2++) sheds further light on the actual quitting success of pregnant smokers at 4 weeks. They found a self-reported quit rate of 40.5% - which is in line with the DH statistical bulletins. However, the clients taking part in their study were more consistently CO validated and the CO validated success rate for pregnant women was 37.2%.

Although pregnant women are less successful at quitting at 4 weeks through the NHS stop smoking services than other members of the English population, given the unique barriers that pregnant women face in trying to quit (see section 4.6.2), questions can be raised about the utility of using the 4 week benchmark to measure the success of the services. A recent ‘best practice’ review of smoking cessation services for pregnant smokers (M. Lee et al., 2005) highlights that pregnant smokers require intensive and ongoing support for their cessation attempts and the three ‘beacon’ services discussed all provide between 8-12 weeks of intensive support for pregnant smokers, often with ongoing support as needed throughout the pregnancy and post-partum. Interestingly, although these services were found to offer exemplary support to pregnant smokers, they did not achieve the highest quit rates at 4 weeks. This study therefore demonstrates the problems with using the 4 week quit rates for pregnant women to measure service success.

**Strength and applicability of evidence**

Overall, five 3- bulletins and one 2++ study provide a body of evidence that between 35-51% of pregnant women self-report as successful quitters at 4 weeks through the NHS stop smoking services. However, given the unique challenges that pregnant smokers face, the utility of 4 week quit rates as a measure of service effectiveness is questionable.

As all six studies took place within the English smoking cessation services, they are directly applicable to the target population.
4.6.2 What barriers do women face when trying to quit smoking during pregnancy?

**Barriers to quitting**

The last fifteen years have witnessed an emphasis on the status of the foetus in medical and legal matters (L. Greaves et al., 2003). This ‘supersubjectivity’ of the foetus (S. Bordo, 1993) has led to increased recognition of the effects of behaviours such as smoking, drinking and drug taking on the foetus, but has also solidified negative social and legal attitudes towards pregnant smokers (L. Greaves et al., 2003). Therefore, pregnant smokers are under immense pressure to quit smoking during pregnancy for the sake of their foetus.

The majority of pregnant women who quit smoking (between 9-45%) do so ‘spontaneously’, without any formal intervention (T. Lawrence et al., 2005; L. Greaves et al., 2003). These spontaneous quitters tend to be older, less addicted, more highly educated, and less likely to have a partner who smokes (Greaves et al. 2003). Indeed, spontaneous quitters are likely to differ in important (but often uninvestigated) ways from those pregnant smokers who take part in smoking cessation programmes, with the former less likely to return to smoking following the birth of their baby (T. Lawrence et al., 2005).

On the other hand, pregnant smokers who enrol in smoking cessation programmes are likely to wish to merely suspend their smoking behaviour for the duration of their pregnancy as opposed to quit altogether (T. Lawrence et al., 2005). They are also more likely to be from routine and manual groups and may experience multiple barriers that make long-term smoking cessation difficult. For example, C. Butler and A. Bryce (2005) in their study on young pregnant smokers in Renfrewshire, Scotland, found that for some clients, life was a struggle on a daily basis. Many of the pregnant smokers in the study had problems with housing, financial difficulties, relationships and mental health and emotional issues.

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**Background Evidence**

Background evidence shows that pregnant smokers face numerous barriers when trying to quit. They are more likely to be from routine and manual groups and may experience more pressing issues such as financial and relationship difficulties, and may also fear being judged for their smoking behaviour.

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33 An important exception is a series of HEA surveys commissioned between 1992 and 1999 that explore the changes in smoking behaviour of women over the course of their pregnancy (L. A. Owen & G. L. Penn, 1999).

34 See also L.A. Owen and G.L. Penn (1999) for a discussion of this issue.
Barriers to recruitment

Given the stigma that pregnant smokers experience and the broader barriers to quitting that they experience, attracting pregnant women into smoking cessation programmes poses significant challenges for the NHS services. One of the most fundamental barriers to recruitment is the problem of misreport amongst pregnant smokers. Smoking rates amongst pregnant women have usually been measured by self reports through questionnaires or interviews. However, when more objective measures of smoking status have been used, considerable discrepancies emerged (R. P. K. Ford et al., 1997). While rates of misclassification appear to be in the order of 5-10% in the general population, misreport is significantly higher amongst pregnant smokers – one international study has reported a ‘deception’ rate of 38% (R. P. K. Ford et al., 1997).

In the UK context, L. Owen & A. McNeill (2001) also discuss the problems with using self-report to assess smoking in pregnant women and the findings of their study suggest that smoking in pregnancy may be significantly higher (perhaps more than double the target) than previous government estimates – although there were no significant differences in rates of reporting in pregnancy by occupational class, education or tenure (H. Graham & L. Owen, 2003). The authors stress that because smoking may be perceived to be particularly undesirable among pregnant women, it is important to validate smoking status within this group using biochemical measures.

Aside from this basic barrier to recruitment, there are also many other challenges that the services face in attracting pregnant smokers. Marr (2005) reports that in the Northeast, the largest barriers to recruitment into smoking cessation programmes are poor engagement and the transient nature of the population. Many of the pregnant smokers are teenagers and are unfamiliar with the concept of behaviour change, and boredom seems to be a key factor in continued smoking. Moreover, this population of smokers frequently move or change their phone number which compromises the ability of specialist advisors to recruit them into the programmes.

J. Cleland et al. (2006) have undertaken a qualitative study in Northeast Scotland of the attitudes of primary healthcare professionals’ (HCPs) towards smoking cessation which provides further information about barriers to recruitment into smoking cessation interventions. Pregnant smokers from low SES groups were thought to lack motivation to quit and HCPs did not feel that they had the skills to address these motivational issues – many voicing the concern that they would be seen as ‘preaching’ to the women. HCPs expressed the fear that attempts to provide smoking cessation advice would jeopardise the professional-patient relationship and that ensuring women attended ante- and post-natal care was more important than providing such advice. Interviewees also indicated a preference for referring pregnant smokers on to special cessation services as opposed to tackling this issue themselves. The concerns HCPs voiced in McCelland et al’s (2006) study, seem borne out by other studies that have been conducted with pregnant smokers themselves.

R. Lowry et al.’s (2004) study focusing on Sunderland PCT also identified a number of other barriers that pregnant women face when trying to quit smoking during pregnancy, such as unsatisfactory information, lack of enthusiasm or empathy from healthcare professionals and short-term support, all showing as a reluctance to be recruited (pg. 240). To overcome these barriers they engaged in proactive recruiting, with a dedicated worker undertaking home visits, as well as conducting role plays to enhance the ability of health professionals to empathise with their clients.
Other studies also exist that provide useful information about how smoking cessation interventions might be tailored for pregnant smokers. Therefore, although a discussion of ‘best practice’ in smoking cessation services for pregnant smokers was not part of the remit of this review, a summary has been provided of approaches that appear to be working successfully (see table 8). Given that these studies did not directly relate to the key research questions, they have not been evaluated. However, the conclusions they draw seem to offer valuable insights into what interventions are most effective.

<table>
<thead>
<tr>
<th>No. 23</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Background Evidence</strong></td>
</tr>
<tr>
<td>Background evidence indicates that there are numerous barriers to recruiting pregnant women into smoking cessation programmes. One of the most fundamental barriers to recruitment is the problem of misreport amongst pregnant smokers – which indicates the importance of biochemically validating smoking status. Health care professionals are also often unwilling to address smoking with their pregnant clients in the fear that it will jeopardise their relationship with the clients.</td>
</tr>
</tbody>
</table>
### Table 8. Studies taking place within the NHS stop smoking services that point to innovative and potentially effective interventions for pregnant smokers

<table>
<thead>
<tr>
<th>Reference</th>
<th>Study population</th>
<th>Content of the intervention</th>
<th>Job title/position of the deliverer</th>
<th>Significant features of an effective deliverer</th>
<th>Site or setting of the intervention</th>
<th>Does the intensity of the intervention influence its effectiveness?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(M. Lee et al., 2005)</td>
<td>Pregnant women in 3 beacon NHS smoking cessation services</td>
<td>Provide intensive multi-session treatment delivered by a small number of full time staff and offer NRT to almost all pregnant smokers</td>
<td>Less relevant than whether they provide smoking cessation advice as part of routine or dedicated service</td>
<td>Information not provided.</td>
<td>Flexible home visits</td>
<td>Not explicitly stated but it is implied that more intensive interventions are more effective.</td>
<td>This paper provides a discussion of best practice in smoking cessation services for pregnant smokers.</td>
</tr>
<tr>
<td>(C. O'Gorman, 2005)</td>
<td>Pregnant smokers in North Birmingham PCT</td>
<td>Multi-session, intensive, one-on-one behavioural support (group sessions do not work) with offer of NRT</td>
<td>Specially trained, dedicated midwives</td>
<td>non-judgemental; full, frank information; individualised attention; encouraging; supportive; builds confidence; works as team; provides positive feedback; empowering; empathetic</td>
<td>Home-based; involving partners and family</td>
<td>Information not directly provided; but the importance of sustained support and follow up is emphasised</td>
<td>Result: Set quit date: 61% of referrals Successfully quit at 4 weeks: 39% CO validated quits: 25%</td>
</tr>
<tr>
<td>(D. Tappin et al., 2005)</td>
<td>Pregnant smokers at two antenatal clinics in Glasgow</td>
<td>Home-based motivational interviewing</td>
<td>Specially trained midwives</td>
<td>Information not provided</td>
<td>Home-based</td>
<td>Not assessed</td>
<td>Results: home-based motivational interviewing did not significantly increase smoking cessation amongst pregnant women. Authors</td>
</tr>
<tr>
<td>Study</td>
<td>Description</td>
<td>Intervention Details</td>
<td>Staff Details</td>
<td>Services Details</td>
<td>Impact</td>
<td>Notes</td>
<td></td>
</tr>
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<td>-------</td>
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<td>--------------</td>
<td>-----------------</td>
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<td></td>
</tr>
<tr>
<td>(B. Marr, 2005)</td>
<td>Pregnant smokers in Sedgefield Durham Dales and Darlington PCTs</td>
<td>Intensive one-on-one behavioural counselling accompanied by intensive telephone contact and offer of NRT</td>
<td>Midwife employed in a dedicated position as a smoking cessation specialist</td>
<td>Clinic services close to women's homes and where appropriate, home visits.</td>
<td>Increasing # of phone follow up calls in first week led to significant increase in # of clients staying in their quit programmes &amp; # of 4 week quits.</td>
<td>Paper recommends the benefits of harm reduction as even ‘failed’ quitters experienced a substantial reduction in CO levels.</td>
<td></td>
</tr>
<tr>
<td>(C. Butler &amp; A. Bryce, 2005)</td>
<td>Pregnant smokers, 25 years and under</td>
<td>Intensive one-on-one behavioural counseling with offer of NRT</td>
<td>Midwife employed specifically in a dedicated position as smoking cessation specialist</td>
<td>Flexible service at time &amp; location of client's choice but most clients preferred home visits</td>
<td>N/A: intensive intervention took place</td>
<td>Results: 20% quit rate at 3 months 16% quit rate at 12 months</td>
<td></td>
</tr>
<tr>
<td>(R. Lowry et al., 2004)</td>
<td>Health workers delivering Interventions to pregnant women</td>
<td>Role play with actor to increase empathy for pregnant smokers</td>
<td>Health professionals (largely midwives) – although study stresses the importance of training</td>
<td>Support, empathy &amp; enthusiasm rather than a nagging &amp; judgemental attitude</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>(T. Taylor &amp; P. Hajek, 2001)</td>
<td>All PCTS with smoking cessation services for pregnant women</td>
<td>Maudsley model or the Prochaska and DiClemente Cycle of Change</td>
<td>Interveners do not have to have a background in midwifery.</td>
<td>Information not provided</td>
<td>More intensive treatments yield better results. Optimum # of contacts between 4-6</td>
<td>Paper presents results of a nation-wide survey of smoking cessation services for pregnant women. Provides useful recommendations re: models of best practice.</td>
<td></td>
</tr>
</tbody>
</table>
4.7 How does the effectiveness of stop smoking interventions vary for routine and manual groups?

It is extremely difficult to ascertain how successful the NHS stop services have been in reaching people from routine and manual groups, as occupation is not part of the minimum data set required by the Department of Health. Some local services are independently collecting this data but the collection methods are not standardised across services, rendering the information somewhat unreliable (C. Johnson & E. Croghan, 2005). The fact that demographic information on occupation is not required by the Department of Health despite the mandate to reduce smoking prevalence amongst routine and manual groups seems paradoxical. Indeed, A. Killoran et al. (2006) argue that current NHS smoking cessation interventions are “non-equity-oriented” and that minimal guidance has been made available on how the services should promote themselves and tailor their support to the needs of the disadvantaged communities they served. They conclude that, “while the national evaluation [published in 2005] demonstrates important successes of the NHS smoking cessation programme, the opportunities to advance the evidence base, particularly in relation to supporting smokers in the most disadvantaged groups to quit, have not yet been fully realised”.

4.7.1 How regularly are people from routine and manual groups accessing smoking cessation services?  

Five evaluations of the NHS stop smoking services look specifically at how effectively the services have been in accessing disadvantaged groups. These evaluations all report that the services are located and available in the areas of deprivation and have been quite successful in reaching members of these groups (J. Chesterman et al., 2005; NEPHO, 2005; H. Lowey et al., 2002; A. Baker et al., 2006).

According to H. Lowey et al. (2002) (rating 2++), who explored health inequalities in 7 Health Authorities (HAs) in the Northwest, smokers who set a quit date were more likely to reside in deprived areas compared with the distribution of the Northwest region’s population. Their findings indicate that smoking cessation services in the Northwest are achieving their remit to attract smokers from deprived areas.

More recently, the North East Public Health Observatory (2005) (rating 2+) assessed clients setting quit dates by postcode and divided them into deprivation quintiles. They similarly found that a higher percentage of smokers from deprived areas were setting quit dates. J. Chesterman et al. (2005) (rating 2++) also found evidence of ‘positive discrimination’ in all 19 Health Authorities analysed in their study. An evaluation conducted by the West Midlands Public Health Observatory (A. Baker et al., 2006) (rating 2++) reports considerable variation within regional services. They found that in Birmingham and Black Country SHA, smokers living in the most deprived areas were less likely to access stop smoking services. In West Midlands South SHA there was no clear pattern between deprivation and access to stop smoking services. However, in Shropshire and Staffordshire SHA it appeared that

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35 At present the ‘reach’ of the NHS stop smoking services can only be determined by the number of people setting quit dates, as opposed to the number of people accessing smoking services. The vast majority of services record the details of those people who have set quit dates, not those who have accessed the services in total. One of the few available studies that has recorded the numbers of people accessing stop smoking services as well quit dates set (H. Lowey et al., 2002) discovered that 53.4% of people accessing the regional stop smoking services did not set a quit date. H. Lowey et al. (2002) therefore sensibly recommend that, “smoking cessation services should record basic demographic details, i.e. age, sex and postcode of all smokers who access the services, irrespective of whether a quit date was set”.

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smokers living in deprived areas were more likely to access stop smoking services, especially compared to smokers living in the most affluent areas.

No. 24

Strength and applicability of evidence

Three 2++ studies and one 2+ study provide a body of evidence that the NHS stop smoking services have been effective overall in reaching routine and manual groups. However, one of these studies reports that there is variation within regional services, and some SHAs have been less successful in deprived smokers than other authorities.

As all four studies took place within the English smoking cessation services, they are directly applicable to the target population.

4.7.2 How successful are people from routine and manual groups in quitting once they have accessed services?

The only available proxy indicator of deprivation available in the DH statistical bulletins is whether or not the clients who successfully quit at 4 weeks did so in spearhead trusts. While not a particularly sensitive indicator of social class, there is a broad correlation between deprivation and health inequalities which allow some general conclusions to be drawn from these statistics.

Six annual statistical bulletins (DH, 2005; DH, 2004; DH, 2003; DH, 2002; DH, 2001a; DH, 2001b) (rating 3-) have been published by the Department of Health that evaluate the short term (4 week) success of the NHS stop smoking services between 1999 and 2005 broken down by PCT. The findings of these statistical bulletins are graphically represented in Figure 9.

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36 The Spearhead Groups consist of 88 PCTs from various SHAs. Spearhead PCTs by and large represent the same areas of deprivation as the earlier HAZs (Health Action Zones). Spearhead groups are defined on 5 measures, 4 of which are indicators of health (expectancy, cancer and heart disease, stroke and related diseases) and one of which is linked with the Index of Multiple Deprivation (IMD). Considering that health inequalities have been linked to low SES groups, which include manual and routine workers, it is likely that there is a large percentage of manual and routine groups living in Spearhead PCTs.

37 In 1999/00 the stop smoking services were only delivered in HAZs not England as a whole. Deprived areas were identified as HAZs until 2004 when they became Spearhead PCTs.
According to the DH Statistical bulletins, the self-reported quitting success among people from deprived areas at 4 weeks is lower than the overall success for England as a whole (see Figure 9).

Studies using more sensitive indicators of SES have also found that while services based in more deprived areas appear to be reaching smokers from manual groups, they achieve lower cessation rates than less deprived areas. L. Bauld et al. (2003): 298 (rating 2++) found that “services operating in deprived parts of the country achieved lower cessation rates than those in more affluent areas”.\(^{38}\) This finding has been consistently confirmed in other studies that have been conducted based on both self-report and CO validation. Thus, the North East Public Health Observatory (2005) (rating 2+) found that people from deprived quintiles were less likely to be CO validated successful quitters at 4 weeks than those living in more affluent quintiles – and that this difference was statistically significant. H. Lowey et al. (2002) (rating 2++) similarly found that although a higher proportion of people from the most deprived areas are setting quit dates than from the least deprived areas, there are not correspondingly higher proportions of people who self-report as successful quitters at 4 weeks. The West Midlands Public Health Observatory (A. Baker et al., 2006) (rating 2++) also found that at a regional level there was a relationship between quit status and deprivation, with smokers living in the most deprived areas less likely to self-report as quit than smokers living in the most affluent areas (51.5% and 59.2%, respectively). An assessment by A. Watt et al. (2005) (rating 2-) of the stop smoking services in Cornwall and the Isles of Scilly also reports that manual and routine groups had good access rates but poor quit rates, as does a health equity audit conducted by South Gloucestershire PCT (2005) (rating 2+).

\(^{38}\) See also Judge et al.’s (2005) (rating 2++) and Ferguson et al.’s (2005) (rating 2++) reports from the same evaluation of the NHS smoking cessation services.
No. 25

Strength and applicability of evidence

Overall, six 3- bulletins, one 2- study, two 2+ studies and three 2++ studies provide a consistent body of evidence that people from routine and manual groups are less successful in quitting successfully (based on both self-report and CO validation) at 4 weeks than other smokers.

As all twelve studies took place within the English smoking cessation services, they are directly applicable to the target population.

4.7.3 Are there any factors that might inhibit the ability or desire of members of routine and manual groups to access services or quit smoking?

Socio-economic barriers

Smoking among routine and manual groups carries more meaning and is more typical than among higher SES groups. In many areas of deprivation, smoking is perceived as the norm and there is no culture of quitting, which makes quitting harder (M. Jarvis & J. Wardle, 1999; A. Killoran et al., 2006; N. Jackson & A. Frebble, 2002). In their qualitative study of the barriers that people from deprived groups experience in accessing smoking cessation services, E. Jones et al. (2002) report that all participants were aware of the risks of smoking and had tried to quit smoking on numerous occasions. However, overall participants had little knowledge about smoking cessation interventions and their level of effectiveness. Reported barriers to accessing the smoking cessation services were factors such as cost, timing, lack of childcare, lack of appropriate information, perceived ineffectiveness and negative publicity.

No. 26

Background Evidence

Background evidence shows that smokers from routine and manual groups face numerous social and economic barriers that may inhibit their ability to quit. In many areas of deprivation, smoking is perceived as the norm and there is no culture of quitting. Moreover, those deprived smokers who are willing to quit may have little knowledge about the effectiveness of smoking cessation interventions and may also find it difficult to attend sessions.

Disadvantage & Addiction

Another key barrier to quitting is the high level of nicotine dependence among routine and manual groups. Studies have shown that members of manual/routine groups are often more highly addicted, have been smoking since a young age, and smoke more cigarettes per week compared to professional workers (H. Lowey et al., 2002; A. Killoran et al., 2006; E. Jones et al., 2002). Thus, disadvantaged smokers face this additional hurdle when attempting to quit smoking through the NHS stop smoking services.

In their evaluation of the NHS Stop Smoking Services, L. Bauld et al. (2004) found that smokers from higher socio-economic groups tended to have lower levels of addiction than smokers from lower socio-economic groups (see table 9). Indeed,

39 This is a powerpoint presentation and could not be evaluated.
while 62.4% of high SES smokers attending the services exhibited low levels of addiction (levels 1 and 2), 56.4% of low SES smokers exhibited moderate to extremely high levels of addiction (levels 3, 4 and 5).

### Table 9. Disadvantage and Dependence

<table>
<thead>
<tr>
<th>Level of Addiction</th>
<th>Socio-economic Group</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Highest to lowest)</td>
<td>%</td>
</tr>
<tr>
<td>1 (Low)</td>
<td>1 % 21.7</td>
<td>18.6</td>
</tr>
<tr>
<td></td>
<td>2 % 22.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 % 14.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 % 15.1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1 % 40.7</td>
<td>33.1</td>
</tr>
<tr>
<td></td>
<td>2 % 34.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 % 26.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 % 28.5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1 % 24.9</td>
<td>27.4</td>
</tr>
<tr>
<td></td>
<td>2 % 26.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 % 29.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 % 27.2</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1 % 8.9</td>
<td>15.8</td>
</tr>
<tr>
<td></td>
<td>2 % 13.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 % 20.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 % 19.4</td>
<td></td>
</tr>
<tr>
<td>5 (High)</td>
<td>1 % 3.7</td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td>2 % 3.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 % 9.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 % 9.8</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>N=</td>
<td>562</td>
<td>6616</td>
</tr>
<tr>
<td></td>
<td>2214</td>
<td></td>
</tr>
<tr>
<td></td>
<td>892</td>
<td></td>
</tr>
<tr>
<td></td>
<td>397</td>
<td></td>
</tr>
</tbody>
</table>

(Reproduced from L. Bauld et al. 2004)

Given that high levels of addictedness are negatively associated with quitting success, in both the short and long term (see section 4.4.2), this factor goes a long way towards explaining the lower cessation rates achieved by the NHS stop smoking services in more deprived areas.

### Background Evidence

**No. 27**

Background evidence shows that smokers from routine and manual groups are often more highly addicted, have been smoking since a young age, and smoke more cigarettes per week compared to professional workers, which is a key factor in explaining the lower cessation rates achieved by the NHS stop smoking services in deprived areas.

### Alternative approaches to cessation

In light of the barriers that people from deprived groups experience in accessing smoking cessation services, some areas are experimenting with more flexible models of delivery that appear to be yielding promising results. One alternative to the traditional form of intensive group therapy has been documented by S. Shultz and D. Ritchie (2005) (rating 2-) in a study called *The Smokey Joe Story: assessing the effectiveness of narrative therapy*. The group work technique is called adapted

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40 Level of addiction is a summary measure based on whether smokes within 5 minutes of waking, smokes 31 or more cigarettes per day, has great difficulty going a whole day without smoking, smokes to cope rather than for pleasure, and another regular smoker in household.

41 Socio-economic group is a summary measure based on whether education finished by 16, single parent, rented housing, unemployed or permanently sick/disabled, whether eligible for free prescriptions and aged under 60, lowest deprivation decile.

42 We are discussing this study as an example of alternative intervention types only. As it does not directly relate to the research questions it has not been evaluated.
narrative therapy for smoking cessation and was conducted in a deprived area in Scotland. “Narrative therapy aims to deconstruct negative dominant ‘self’ stories through the therapeutic process, so that the ‘forgotten and unnoticed elements of lived experiences’ can be revealed” (S. Schultz & D. Ritchie, 2005). Smokers attending ‘Smokey Joe’ do not have to set a quit date and are offered in-depth guidance on how to approach the decision to quit. This group work technique was well received amongst the lower income groups accessing the service, and participants particularly valued the flexibility of the services to their needs. Moreover, the researchers found that the two lowest deciles of deprivation accounted for more than twice as many attendees than the two highest deciles.

The ‘Smokey Joe’ programme produced a 12 month quit rate of 16% (based on self-report), which compares favourably with long-term quit rates produced by the NHS stop smoking services more generally. This form of group work may provide an example of how services can be adapted, or additional elements added, to offer a flexible and successful approach that may appeal to more heavily addicted, disadvantaged female and male smokers.

According to a 2- study, more flexible modes of delivery help to make smoking cessation interventions more accessible for people from deprived groups and produce 12 month self-reported quit rates of 16% - which is comparable with the long-term effectiveness of the NHS stop smoking services more broadly.

As this study took place within the UK smoking cessation services, it is directly applicable to the target population.

4.8 How does the effectiveness of stop smoking interventions vary for institutionalised populations?
Available evidence indicates that there are very high rates of smoking amongst institutionalised populations. Cessation brings with it significant personal and clinical issues that are particularly complicated for institutionalised smokers, and smokers in these settings experience many unique barriers to quitting. Although the NHS stop smoking services have increasingly moved into both of these settings, definitive evidence on the effectiveness of cessation support amongst institutionalised populations is limited (especially in relation to services in mental health settings – which are still in their infancy).

4.8.1 Prison Population
Available evidence indicates that up to 80% of prisoners in UK correctional facilities smoke (S. MacAskill & D. Eadie, 2003; Department of Health, 2003). However, smoking cessation support has become widely available in prisons – especially since the introduction of NRT funding for prisons in 2003. According to a recent report (S. MacAskill & D. Eadie, 2003), nearly 80% of prison-based respondents surveyed in England and Wales reported smoking cessation support for prisons being undertaken in the previous 12 months.

The evidence in this section of the report has not been rated as it does not directly refer to smoking cessation support in institutional settings delivered through the NHS stop smoking services. In the context of prisons, the NHS stop smoking services do deliver some of the interventions; however, the reports cover all smoking cessation support offered in this setting.
Nevertheless, it appears that relatively few prisoners overall take up smoking cessation support while in prison. In a recent study (S. MacAskill, 2005) (rating 2++), 1,581 prisoners in 15 prisons in the North West region were recorded as setting a quit date in 2004-2005 and the numbers participating increased over the study period, indicating an intensification of demand as the facilities became more established. The researcher estimates that more than a quarter of the prisoners likely to have attempted to quit during the 2004-05 period were supported in doing so, representing 9% of the prison population of smokers overall.

This study has found that smoking cessation interventions in prisons achieved CO-validated 4 week quit rates of 41% – this rate increases to 50% if those lost to follow-up are excluded (S. MacAskill, 2005). However, the study notes substantial variation in the success rates between different prisons in the region (ranging from 8% to 64%).

The 4 week quit rates recorded in this study are lower than the national quit rate through the English NHS smoking cessation services of 57% (self-report) in the same period. The author suggests that several factors may be responsible for the lower quit rates recorded in the study, although she attributes the discrepancy largely to the characteristics of the prison population: prisoners come predominantly from disadvantaged communities where cessation rates are lower, and prisoners tend to be in younger age groups, where cessation rates are also lower. However, as the author points out, 100% of quitters in the prison population were CO-validated, in contrast to the national figures, where only 35% of self-reported quitters were CO validated.

**No. 29**  
**Strength and Applicability of Evidence**  
Although up to 80% of prisoners in UK correctional facilities smoke, according to a recent 2++ report, overall a relatively small proportion of smokers (less than 10%) access smoking cessation support whilst in prison. However, prisoners can achieve CO-validated 4 week quit rates of over 40%, although there appear to be substantial differences in the success rates of different prisons.

As this study took looks at the effectiveness of the smoking cessation services in UK prisons, it is directly applicable to the target population.

**What barriers to smoking cessation do prison populations face in accessing services and successfully quitting?**  
Smoking is a central feature of prison life and there is a strong smoking culture among prisoners (S. MacAskill & D. Eadie, 2003). Smoking provides relief from boredom and the stressful environment as well as fostering a sense of group membership – particularly important in the potentially threatening environment of prison (Department of Health, 2003).

Aside from these more positive dimensions, a number of prisoners do recognise the negative aspects of smoking, such as its high proportionate cost (especially in relation to the very low wages earned by prisoners) and its negative health effects (Department of Health, 2003). Indeed, available evidence indicates that a significant proportion of prisoners (between 41-50%) want help in quitting smoking (S. MacAskill & D. Eadie, 2003).
However, prisoners face unique problems when making a quit attempt. The endemic levels of smoking, the limited environment and its lack of opportunities for distraction from cravings, and the general stresses of prison life all serve to undermine attempts to quit smoking (S. MacAskill & D. Eadie, 2003; Department of Health, 2003). Negative attitudes towards smoking cessation amongst staff and fellow prisoners also undermine a quit attempt; and the associated withdrawal symptoms can become more problematic in the context of prison life (Department of Health, 2003).

No. 30

Background Evidence

Smoking is a central feature of prison life and provides relief from boredom, the stressful environment as well as facilitating group membership. Therefore, prisoners face unique problems when making a quit attempt because of the endemic levels of smoking, the lack of opportunities for distraction from cravings and negative attitudes to cessation amongst staff and fellow prisoners. Despite these barriers, a number of prisoners recognise the negative aspects of smoking, including its health and financial costs and available evidence indicates that up to 50% of smokers in prison want help in quitting smoking.

4.8.2 Mental Health Institutions

Smoking rates are higher among people with a mental illness than the regular population (ASH, 2005b). According to the Department of Health, smoking prevalence among the general population was 27% in the UK in 2000 and up to 39% among women with mixed anxiety/depressive disorder and 67% among men with a phobia (Ref). Smoking prevalence is even higher among those with a psychotic disorder such as schizophrenia. The 1996 Office for Population Censuses and Surveys (OPCS) surveyed residents with psychotic disorders in Great Britain and found that 74% of people with a schizophrenic disorder and living in institutions were smokers (A. McNeill, 2001; A. McNeill, 2003; D. M. Ziedonis et al., 2003). However, smoking cessation among those with mental illness has been largely overlooked by health professionals. Among patients motivated to quit, there have been reports that they receive little support or advice on how to quit (A. McNeill, 2001; A. McNeill, 2003). Unfortunately, there are no available studies which provide information on how effective smoking cessation support is in mental health institutions, although the NHS stop smoking services are starting to conduct cessation programmes in this setting, given the growing recognition that a period of hospitalisation is an opportunity for health promotion on smoking (A. McNeill, 2001).

No. 31

Background Evidence

Although it appears that rates of smoking are particularly high amongst people in mental health institutions in the UK, there is no available information on how effective smoking cessation support is in this setting.

What barriers to smoking cessation do people with a mental illness in mental health institutions face in accessing services and successfully quitting? Smoking cessation among people with a mental illness can be complicated by many things, such as physiological vulnerability to nicotine addiction, the fact that nicotine may reduce the side effects of some medications, the positive effects of nicotine on
the brain\textsuperscript{44}, the negative experience of withdrawal, the use of cigarettes as a
behavioural reward in residential care, and lack of access to cessation services and

Withdrawal symptoms can be particularly strong barriers to quitting; the depressive
symptoms experienced during the early acute withdrawal phase are often associated
with a failed quit attempt and smokers with severe mental illnesses may experience
an exacerbation of psychiatric symptoms while they are trying to quit or cut down
(Dalack, 1996). For these reasons health professionals have been wary of
implementing smoking cessation programmes for people with mental illnesses\textsuperscript{45} (A.

\begin{table}[h]
\centering
\begin{tabular}{|p{0.9\textwidth}|}
\hline
\textbf{No. 32} \\
\textbf{Strength and applicability of evidence} \\

People with mental illnesses in institutional settings face a variety of barriers in
accessing services and quitting smoking. Smoking cessation in this setting can be
complicated by factors such as physiological vulnerability to nicotine addiction, the
fact that nicotine may reduce the side-effects of some medications, the positive
effects of nicotine on the brain, and the use of cigarettes as a behavioural reward and
lack of access to cessation support.

\hline
\end{tabular}
\end{table}

\textsuperscript{44} Nicotine receptors are abundant in the brain and may help to alleviate some symptoms of
schizophrenia (T. P. George et al., 1999; D. M. Ziedonis et al., 2003). Smoking may also

\textsuperscript{45} A. McNeill (2001) and S. Goldsack (2004) warn against cessation for people with mental
illness who are in acute services, as withdrawal could exacerbate symptoms of the mental
disorder. S. Goldsack (2004) also suggests reducing the use of smoking rooms and sending
smokers outside to smoke, although she recommends proceeding with caution. Service
users may view the institution as their home, thus she suggests that the smoking area should
be nearby and protected from the weather. S. Goldsack (2004) provides ideas around
reducing use for residential settings: 1) giving notice that a smoking room will be used only for
limited hours; 2) allowing only one person at a time; and 3) eventually closing the ‘smoking’
room altogether, with service users smoking outside where practicable.
4.9 What are the facilitators and what are the barriers to implementing effective smoking cessation interventions?

L. Bauld and V. Williams (2006) argues that there are three central principles that need to be considered when determining what model of support should ideally be available to clients accessing stop smoking services: choice, need and practicality. These three principles can be thought of as factors facilitating effective smoking cessation interventions. First, smokers should ideally be offered a choice regarding the form of treatment they wish to access (L. Bauld et al., 2005). One type of smoking cessation intervention will not necessarily ‘fit’ all smokers. As discussed in section 4.6, group support is inappropriate for most pregnant smokers. L. Bauld and V. Williams (2006) also point out that for smokers with unusual working hours (who will often be from manual or routine groups) the flexibility provided by pharmacy based services may be attractive. Indeed, it appears that pharmacy-based services may have significant potential to reach large numbers of smokers in deprived areas (see section 4.2.4).

L. Bauld and V. Williams (2006) also argue that some initial assessment of need will help to determine what form of service is right for the smoker – which will also help to maximise the effectiveness of the intervention. Thus, they argue that more intensive group-based support may be best for more heavily addicted clients. Given that smokers from manual and routine groups tend to be more heavily addicted than other smokers, this may be the best option for some.

Finally, L. Bauld and V. Williams (2006) argue that services need to decide what model is most appropriate for their area given pragmatic concerns such as location. For example, while group support is easily developed in urban, built-up areas, it may be impractical in rural locations – whatever the needs of the individual smoker. As L. Bauld et al. (2005: 26) state, “Treatment needs to be accessible to smokers and local implementation must be both flexible to the needs of urban and rural areas and different client groups”.

Given that the NHS stop smoking services appear to be reasonably successful in helping smokers to quit, a key barrier to implementing effective interventions, especially amongst manual groups and ethnic minorities, appears to be the low level of awareness of the services and their overall effectiveness (E. Jones et al., 2002).

<table>
<thead>
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<th>No. 33</th>
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<tbody>
<tr>
<td><strong>Strength and applicability of evidence</strong></td>
</tr>
<tr>
<td>Overall, seems evident that the key barrier to implementing successful interventions is a general lack of awareness of the services and their potential effectiveness in helping smokers to quit. The key facilitators to implementing successful interventions appears to be providing flexibility and choice, assessing the individual need of the smoker, while recognising that local conditions will to some extent determine the most appropriate models of delivery.</td>
</tr>
</tbody>
</table>
5. Overview and Discussion

There is a limited body of available evidence on many of the research questions posed for this rapid review. In many cases the quality of the evidence is low and in other cases there are very few available studies on the issue under examination. There are several general problems with the data that are routinely collected or embedded in intervention studies. These problems affect the comprehensiveness of the data, its generalisability and its utility in indicating intervention improvements and new research questions. There is also a general lack of sex and diversity-disaggregated data collection, reporting, and analysis, making it difficult to comprehensively answer some of the questions. As a result, it is not possible to fully describe and effectively analyse the specific patterns and needs of women and men, or of women and men of diverse ethnic groups and how any differences may have arisen. Nevertheless, while the body of evidence on the effectiveness of intensive smoking cessation treatments delivered through the NHS is not necessarily definitive, it does provide some useful indicative information on how effectively the services are operating.

Overall, there is a body of 3- and 2++ evidence that NHS intensive interventions for smoking cessation can be effective in both the short term (4 weeks) and long term (52 weeks). However, given that long-term follow up has proved both difficult and labour intensive, with extremely high rates of loss to follow up, the use of 4 week quit rates as a proxy indicator of long-term effectiveness seems justified.

There are a variety of internal factors that may influence the effectiveness of intensive interventions for smoking cessation delivered through the NHS stop smoking services. Five factors were highlighted as potentially impacting the effectiveness of interventions: content, delivery, deliverer, setting and intensity. Unfortunately, there are few available studies which disaggregate the cessation rates of intensive interventions and intermediate interventions offered in primary care (e.g. pharmacies and GP practices), although one early 3- bulletin indicates that intermediate interventions delivered by community advisors achieve self-reported cessation rates of 34% at 4 weeks.

There is some evidence specifically on the effectiveness of pharmacy interventions. According to a 1++ structured review, pharmacy-delivered interventions may have a positive effect on smoking cessation rates. This finding is confirmed in a recent 2++ study which reports that pharmacy-delivered interventions in Glasgow produce 4 week CO-validated quit rates of approximately 20%. The study also indicates that pharmacy-delivered interventions have the potential to reach and treat large numbers of smokers – especially those from disadvantaged areas.

Overall, two studies (A. McEwan et al., 2005; K. Judge et al., 2005) provide a body of 2++ evidence that group interventions may produce higher CO-validated quit rates at 4 weeks than one-on-one interventions. However, one-to-one interventions are also effective and many clients express a clear preference for one-to-one treatment. Moreover, in some contexts (particularly rural areas), group treatment is simply unfeasible. Therefore, one-to-one interventions are a crucial component of the NHS stop smoking services as smokers are given a choice of treatment options. According to a 1++ RCT, ‘buddy’ interventions do not add to the 4 week success rates of group interventions, although another 1++ RCT indicates that they do substantially increase the effectiveness of one-to-one interventions for smoking cessation.
There is no conclusive evidence on whether the effectiveness of interventions depends on the job title or position of the deliverer, although anecdotal evidence indicates that the position of the deliverer does not generally influence the effectiveness of interventions. However, there is some evidence that setting of interventions may indirectly influence their effectiveness.

One presently underutilised setting which may yield potentially rich results is hospitals. Although many of the stop smoking services do not conduct intensive smoking cessation interventions with inpatients, two 1++ structured reviews have found that intensive interventions (inpatient contact plus follow-up for at least one month) conducted by physicians in international settings are associated with a significantly higher quit rate compared to controls. One 1++ structured review of nurse delivered intensive interventions in hospitals has also found that these interventions are associated with a modest positive increase in smoking cessation.

Five recent randomised controlled trials (ratings between 1+ and 1++) have produced mixed results, although they do seem to confirm that more intensive interventions focusing on patients with smoking-related illnesses with telephone follow-up for at least two months post-discharge yield the highest results. Four of these studies were conducted outside the UK, although it seems likely that their findings are broadly relevant to the UK population. Although the goal of the UK-based study (Cannings 2002) was to determine whether NRT increased the effectiveness of inpatient interventions, the reported quit rate at one year (14%) is in line with the long term quit rates produced through the NHS stop smoking services and provides direct evidence of the effectiveness of intensive inpatient interventions in a UK setting.

A 2++ study suggests that more intensive one-to-one interventions achieve higher CO-validated success rates at 4 weeks than less intensive interventions. However, a 1++ RCT in a primary care setting suggests that intensity alone does not increase the effectiveness of one-to-one interventions in this setting. The findings of this study suggest that more intensive one-to-one interventions may be more effective if they are accompanied by external motivations or pressures to quit (such as ‘buddy’ support or smoking-related health problems).

There are a number of external factors which appear to have also influenced the effectiveness of intensive smoking cessation interventions delivered through the NHS. While target setting has helped to ensure that smoking cessation services are prioritised, it has intensified the pressure on the services to meet quotas, leading to substantial differences in clinical practice and reporting processes which have made it difficult to compare the results of services across the network (N. Willis et al., 2006). Target setting also appears to have undermined the ability of the services to focus service delivery on priority groups, as it leads to a focus on quantity of throughput (A. Killoran et al., 2006).

Although national guidance has been broadly adequate to date, it appears that service providers require more up-to-date guidance and national guidelines in light of the changed circumstances in which the services are operating. C. Johnson & E. Croghan’s (2005) study of smoking cessation coordinators found that there was a strong desire for more good practice sharing amongst the local services and updated national guidelines. National guidance seems particularly urgent in the intermediate interventions delivered in primary care settings as there is a lack of standardisation in both training and payment models.

Aside from those internal and external factors which may influence the effectiveness of stop smoking interventions, there appear to be important differences within the UK smoking population that affect quitting success. One 2- study and three 2++ studies
indicate that age and sex are both correlated with setting a quit date and quitting success. While females set more quit dates than males, they are less likely to succeed in quitting than males. Older smokers (both male and female) are also more likely to quit successfully than younger smokers.

Evidence from two 2++ studies also shows that quitting success is affected by both level of addiction and previous quit attempts. It is clear that more heavily addicted smokers find it harder to quit; however, the evidence regarding the role played by previous quit attempts is inconclusive. One study indicated that previous attempts are positively correlated with quitting success (L. Bauld et al., 2006), while the other study found that previous attempts are negatively associated with quitting success (K. Judge et al., 2005).

Clear evidence surrounding the effect of ethnicity on smoking cessation interventions is presently unavailable, and is hindered by the small numbers of people from BMEG who enrol in the services and the incompleteness of the data collected by the stop smoking services on ethnicity. Five 3- statistical bulletins appear to indicate that the reach of the stop smoking services for ethnic minorities is reasonably good, but indicative evidence from available surveys sheds some doubt on the validity of the statistical bulletins (which are plagued by substantial levels of missing data).

The evidence regarding the intersection between ethnicity, gender and class is also inconclusive. The smoking prevalence amongst females from BMEG is reported to be lower than the smoking prevalence than males, although it is likely that females underreport their smoking status given the stigma surrounding female smokers – especially in South Asian communities (J. Bush et al., 2003). Nevertheless, the DH statistical bulletins indicate that female smokers from BMEG are highly motivated to quit smoking. Overall it does not appear that smoking amongst BMEG is currently associated with social class, except in the South Asian community (J. Bush et al., 2003).

It is difficult to ascertain how successful members of BMEG are in quitting smoking. One available study (NEPHO, 2005) (2+) found that quitting success did not vary based on ethnicity, but the small numbers of BMEG who undertook interventions make it difficult to interpret these findings. All in all, it seems that the NHS services have focused largely on majority populations and provided non-differentiated services, either by gender or ethnicity or, ideally, both. However, there are indications that culturally appropriate interventions can achieve success rates well above the national average as a whole.

The evidence on how effective NHS stop smoking interventions are for pregnant women allows firmer conclusions to be drawn. According to five 3- studies and one 2++ study, between 35-51% of pregnant women self-report as successful quitters at 4 weeks through the NHS stop smoking services, although the utility of 4 week quit rates as a measure of service effectiveness is questionable given the unique challenges that pregnant smokers face. As pregnant smokers are more likely to be from routine and manual groups, many experience more pressing problems that take precedence over smoking cessation, including housing issues, financial difficulties and relationship problems (C. Butler & A. Bryce, 2005).

The smoking prevalence amongst routine and manual groups more generally is significantly higher than for the UK population as a whole. However, it is ironic that while reducing smoking amongst manual and routine groups has been a political priority since the publication of *Smoking Kills*, information on occupation is not part of the minimum data set required by the Department of Health. This makes it extremely
difficult to routinely ascertain how successfully the services have been reaching people from deprived areas. However, four 2+ and 2++ studies on this topic have found that the services are located and available in the areas of deprivation and have been quite successful in reaching members of these groups (J. Chesterman et al., 2005; NEPHO, 2005; H. Lowey et al., 2002; A. Baker et al., 2006).

While these studies have uniformly found that the services appear to be reaching smokers from manual groups, they achieve lower cessation rates than more affluent groups. Background evidence shows that smokers from routine and manual groups face numerous social and economic barriers that may inhibit their ability to quit. In many areas of deprivation, smoking is perceived as the norm and there is no culture of quitting. Importantly, smokers from routine and manual groups are often more highly addicted, have been smoking since a young age, and smoke more cigarettes per week compared to professional workers; this appears to be a key factor in explaining the lower cessation rates achieved by the NHS stop smoking services in deprived areas.

Another sub-population with a particularly high rate of smoking is people in institutional settings, such as prisoners and patients with mental illnesses. Although the NHS stop smoking services have increasingly moved into both of these settings, definitive evidence on the effectiveness of cessation support amongst institutionalised populations is limited (especially in relation to services in mental health settings – which are still in their infancy).

Available evidence indicates that up to 80% of prisoners in UK correctional facilities smoke, although according to a 2++ report, a relatively small proportion of smokers (less than 10%) in prison access support through the NHS stop smoking services. However, it seems that prisoners can achieve CO-validated 4 week quit rates of over 40%, despite the significant barriers they face in quitting smoking – such as the centrality of smoking to prison life, the relief from boredom and the stresses of the prison environment, etc.

Far less is known about how effective smoking cessation programmes are in mental health institutions – although it also appears that rates of smoking are particularly high in this setting. Nevertheless, it is clear that people with mental illnesses face a variety of barriers in accessing services and quitting smoking. Smoking cessation in this setting can be complicated by factors such as physiological vulnerability to nicotine addiction, the fact that nicotine may reduce the side effects of some medications, the positive effects of nicotine on the brain, and the use of cigarettes as a behavioural reward.

Ultimately, it appears that one type of smoking cessation intervention will not ‘fit’ all smokers and it is essential that a variety of options be made available (L. Bauld & V. Williams, 2006). Treatment must be accessible to smokers and flexible to the needs of different client groups (L. Bauld et al., 2005). However, to determine exactly how to tailor and measure smoking cessation interventions in England, more rigorous, precise and comprehensive data collection is needed.
## 6. Evidence Table

<table>
<thead>
<tr>
<th>First author</th>
<th>Study population</th>
<th>Research question</th>
<th>Intervention</th>
<th>Main results</th>
<th>Applicability to UK populations and settings</th>
<th>Confounders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aveyard</td>
<td>N=925 participants randomly assigned to either the minimal support group (N=469, 50.7%) or the moderate support group (N=456, 49.3%).</td>
<td>To assess whether moderate intensity behavioural support increased the quit rates relative to minimal support in primary care.</td>
<td>All participants were seen prior to quitting, phoned on quit day, seen 3 days after quit day and again 4 weeks after quit day. This comprised the minimal support arm. In the moderate support arm, participants received additional behavioural support given in 2 telephone calls 1 and 3 weeks after quitting and an additional visit about 10 days after quitting to motivate enhanced adherence to NRT and renew quit attempts. 15mg/16 hour nicotine patches were given to all participants. Compared participants in minimal vs moderate groups.</td>
<td>Outcome measure was self reported abstinence: The differences between percentage quit in minimal and moderate were not significant. Abstinence were 21.0%, 22.4%, and 1.3% (-4.1%-6.6%) difference at 4 weeks, 11.8%, 10.1%, and –1.7% (-5.7%-2.4%) difference at 12 weeks, and 6.9%, 5.7%, and –1.1% (-4.3%-2.0%) difference at 26 weeks.</td>
<td>This study is directly applicable to the UK population. Minimal behavioural support is as effective as more intensive support when given by flexible appointments in primary care.</td>
<td>No methodological concerns.</td>
</tr>
</tbody>
</table>

**Notes:**
- **Inclusion/exclusion criteria:** Number of participants (randomised to each group or otherwise).
- **Country:** England
- **Study design:** RCT
- **Quality:** 1++

**Inclusion/exclusion criteria:**
- Age: Sex; S/E status; Ethnicity; Pregnant; Other, e.g. inpatient, ....
- Number of participants (randomised to each group or otherwise).

**Funding:**
- Cancer Research UK.

**Comments:**
- No methodological concerns.
<table>
<thead>
<tr>
<th>2. Baker (WMPHO)</th>
<th>2003/04 43,965 clients used in the main analysis. 35,198 used in the deprivation analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004/05 59,325 used in main analysis - 26618 males and 32707 females accessed the SSS across the West Midlands. 50,807 used in the deprivation analysis</td>
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<tr>
<td>Clients were excluded from the analysis if they were found to be duplicate records of their information, age could not be calculated due to the date of birth being missing, age was invalid, gender was not provided, or client was below 18</td>
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<tr>
<td>analysis if the postcode or Super Output Area given did not match those in the West Midlands</td>
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<table>
<thead>
<tr>
<th>2. Baker (WMPHO)</th>
<th>To determine if the Region's Stop Smoking Services are equitable in terms of access and outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006 England Correlational Analysis 2++</td>
<td>Stop Smoking Services offer one-to-one and group support for smokers wanting to quit. 9 services within BBC SHA, 6 within SS SHA and 4 within WMS SHA.</td>
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<tr>
<td>Compared areas of deprivation to the rest of the region. 33% response rate.</td>
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<tr>
<th>2. Baker (WMPHO)</th>
<th>Two measures were access to services and quit rates. Gender: The use: need ratio shows that a higher proportion of females access the Stop Smoking Services, and the highest proportion are from deprived areas (IMD Quintile 2).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age: Although the highest smoking rates are found in the 18-34 age band, the lowest proportion of smokers accessing the services are from the youngest age band (18-34). The highest proportion accessing the services were aged 45-59.</td>
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<tr>
<td>Variation in accessing services depending on level of deprivation and region: They found that in Birmingham and Black Country SHA, smokers living in the most deprived areas were less likely to access services. In West Midlands South SHA there was no clear pattern between deprivation and access. However, in Shropshire and Staffordshire SHA smokers living in the most deprived areas were more likely to access services, especially females.</td>
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<tr>
<td>Females are more likely to access services across the deprivation quintiles. Smokers in deprived areas were more likely to access stop smoking services.</td>
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<tr>
<th>2. Baker (WMPHO)</th>
<th>Survey data from the West Midlands, UK context. Higher proportion of females access the services, services are less likely to attract young smokers. No clear relationship between access and deprivation. Smokers in most deprived areas are slightly less likely to quit and are more difficult to follow up.</th>
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<tbody>
<tr>
<td>Given the estimated smoking rate for males is higher than for females this would suggest a greater number of males need to be encouraged into services.</td>
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<tr>
<td>Services need to target younger groups more effectively.</td>
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<tr>
<td>Access services need to encourage more smokers who live in deprived areas.</td>
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<tr>
<td>The denominator for calculating quit rates contains all records including those clients where the quit status is unknown, therefore it is difficult to know true the quit rates.</td>
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</table>
Smokers in the most deprived areas were less likely to quit than smokers living in the most affluent areas (51.5% and 59.2%).
| Citation | Study population                                                                 | Research question                                                                                                                                                                                                 | Intervention                                                                                                                                                                                                                                                                                                                                 | Main results                                                                                                                                                                                                                                                                                                                                 | Applicability to UK                                                                                      | Confounders Comments                                                                                     |
|----------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3. Bauld 2003 England Cross-sectional survey 2++ | N=88 questionnaires completed by smoking cessation coordinators from across England. When several coordinators operated from different bases, values for particular variable were aggregated where possible or set to missing when in disagreement, producing a coordinator database relating to 76 health authorities. | To determine the extent to which UK NHS smoking cessation services in England reach smokers and support them to quit at four weeks, and to identify which services and area characteristics of health authorities contribute to observed outcomes. Power calculation not reported. Funded by the Department of Health. | At least one completed questionnaire was received from 83% of England's health authorities. Evaluated Reach of the services, Absolute Success, Cessation Rates and Loss to follow up of people accessing the services. 76/99 health authorities (76.8% follow up rate) | A range of service and area characteristics was associated with each outcome: group support proved more effective than one to one interventions in helping a greater proportion of smokers to quit at four weeks (a 10% increase in the proportion of service recipients receiving group rather than on-to-one was accompanied by an increase of 2% in the cessation rate). Services based in health action zones were reaching larger numbers of smokers (140% more smokers than those in other parts of the country) but had lower quit rates than those in more prosperous areas (in moving from an area with a deprivation score at the lower quartile to one at the upper quartile, the reduction in cessation rate would be 6%). | Well developed, evidence based NHS smoking cessation services, reflecting good practice, are yielding positive outcomes in England. | Most of the data are based on self reported smoking status at four weeks, longer term follow up needed to assess longer term impact. |
| Glasgow tobacco strategy: 13 interviews | Analysing the effects of recent and past policies and interventions for smoking cessation in three areas: 1. Glasgow Tobacco Strategy: 2.a. Intensive group-based services: analyse the structure, organisation and effectiveness of group support services using qualitative interviews. 2.b. Evaluate intensive group-based services using data from clients accessing the services. Looked at 4 week quit rates, characteristics of smokers (smoking interventions used and demographic details) and 4 week cessation rates (CO validated) 3. Explore pharmacy based treatments Funded by the Glasgow Centre for Population Health, NHS Health Scotland | Glasgow tobacco strategy; results from Qualitative data: Smoking Services professionals discussed views on Strategy Development, Implementation (including action on young people, supportive environments, media, NHS Glasgow, Communities) and Future Directions.
2.b. Client data: A small number of factors were significantly associated with cessation. Women were less likely to quit than men (OR. 0.56). More affluent smokers were more likely to quit (OR. 2.1). Factors related to smoking history were also associated with successful cessation in the short term. Two indicators of heavier dependence – first cigarette smoked within 5 minutes of waking, and 31 or more cigarettes/day – were associated with lower odds of quitting (OR 0.66 and 0.41 respectively). Smokers who had attempted to quit at least once in the past year were more likely to succeed. In contrast, those who had lower levels of motivation, defined as ‘not at all determined’ or ‘quite determined’ to quit had lower odds of success. Smokers who defined their own health as poor were less likely to quit (OR 0.56). part of the service delivered treatment. Smokers who accessed services in two LHCCs in western Glasgow had a higher chance of success, whereas... | Glasgow tobacco strategy consisting of intensive group support plus access to appropriate pharmacotherapies can help smokers to quit. Outcomes are influenced by a wide range of factors, in particular the socio-economic status of smokers and their smoking history, as well as some elements of the service they receive. In order to improve cessation rates further it may be necessary to examine differences between LHCC groups in terms of facilitation and the support they are providing. It may also be necessary for service providers to more closely examine the characteristics of smokers accessing their service to identify those who may need more intensive support, particularly during the initial weeks of group intervention. | No methodological concerns |
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<tr>
<td>Intensive Group Services: -26 interviews with professionals involved in the working group that developed the strategy or who held a relevant position to the delivery of smoking services. 18 were transcribed in full. -448 client records analysed. Pharmacy based treatment: Pharmacists participating in the Starting Fresh service. 26 pharmacists were supervisors: 10 from corporate chains, 14 from independent pharmacies and 2 based in health centres</td>
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<tr>
<td>4. Bauld 2006 Scotland Qualitative &amp; correlational analysis 2++</td>
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</table>
Smoking Cessation Programme

and NHS Greater Glasgow.

and NHS Greater Glasgow.

those treated by an LHCC in the north of the city had lower odds of quitting.

3. Pharmacists are generally positive about their capacity to deliver the service and viewed smoking treatment as an appropriate extension of their professional role.

combined with evidence about the high proportion of pharmacies in Glasgow that are now participating in the scheme
### Citation
5. Chesterman
2005
England
Correlational
2++

### Study population
Recipient of smoking treatment services who set a quit date, 2001
38778 records from 19 separate smoking cessation services

### Research question
To determine the effectiveness of smoking cessation services in enabling smokers living in disadvantaged areas to access treatment services, and to assess the extent of variations between areas.

### Intervention
- NHS smoking cessation services.
- Elements of this intervention are not discussed in detail.
- 4 weeks follow up.
- Follow up rate not reported.
- Department of Health’s Policy Research Programme.

### Main results
In general, treatment services were seeing smokers from the most disadvantaged areas where smoking prevalence rates were highest; 32.3% of all smokers in receipt of treatment services lived in the most disadvantaged quintile of areas compared with 9.6% resident in the most advantaged quintile. An indicator of 'positive discrimination' was calculated for each health authority area to quantify the extent to which the proportion of disadvantaged smokers being treated was greater than the proportion in the local population. This figure ranged from just under 0% to 18%.

### Applicability to UK
National Health Service (NHS) smoking cessation services have been successful in reaching smokers from disadvantaged communities. If improved access to support for smokers living in the poorest communities can be extended, sustained and translated into long-term quitting then smoking cessation services have the potential to make a useful contribution to addressing inequalities in health.

### Confounders
If the Health Survey of England underestimates smoking prevalence rates among people living in the most disadvantaged areas, then indicators of positive discrimination will be exaggerated.
<table>
<thead>
<tr>
<th>Citation</th>
<th>Study population</th>
<th>Research question</th>
<th>Intervention</th>
<th>Main results</th>
<th>Applicability to UK</th>
<th>Confounders Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Chouinard, M-C 2005 Canada RCT 1++</td>
<td>18 years, hospitalized for CVD, smoker, communicate in French, local resident, telephone at home, plan of hospital discharge at home, no mental or physical disabilities that would impede participation</td>
<td>To evaluate a nurse-delivered inpatient smoking cessation programme based on the Transtheoretical Model with telephone follow-up tailored to levels of readiness to quit smoking on smoking abstinence and progress to ulterior stages of change. Critical alpha value set at 5% (type I error), and a power (1 - beta) of 80% (type II error), the sample size was established at 52 participants per group. Funding not reported</td>
<td>Anurse-delivered inpatient smoking cessation programme was delivered to the experimental group which consisted of: (a) tailored intervention, (b) significant family member involvement, (c) explanation of the stages of change model, (d) information on how family member can support the patient, (e) importance of remaining a nonsmoker - 75% of the 56 participants in the inpatient cessation programme with telephone follow-up received all six telephone calls. Compared smoking abstinence at 2 months (100% follow up rate) and 6 months (98% follow up rate) groups receiving inpatient counseling with telephone follow-up and the one receiving usual care.</td>
<td>the 6-month smoking abstinence rate was 41.5% in the inpatient counseling with telephone follow-up group, compared with 30.2% and 20% in the inpatient counseling and usual care groups, respectively (p = .05). Progress to ulterior stages of change was 43.3%, 32.1%, and 18.2%, respectively (p = .02). Stage of change at baseline and intervention predicted smoking status at 6 months.</td>
<td>This is not a UK sample</td>
<td>A proportion of patients in the intervention condition did not receive the brief bedside smoking cessation counseling from the CNS. Possible Hawthorne effect: research components acted as an assessment and monitoring intervention and that the addition of the brief nurse intervention did not increase the cessation rates about this level.</td>
</tr>
<tr>
<td>7. DH 2001a England Case Report</td>
<td>All smokers accessing (defined by setting a quit date) NHS services, both specialist smoking cessation services/clinics and Intermediate services, i.e. GP practices, nurse interventions, pharmacists</td>
<td>To provide analysis of monitoring returns (quit dates set and 4 week success rates) between April 1999 and March 2000, based on quarterly reports. Power calculations</td>
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<td></td>
<td>14,598 people set a quit date in specialist and intermediate services. 38% of those setting quit dates were seen through specialist services, and 62% were through intermediate services. Nearly two thirds (63%) of those setting quit dates were women. The majority (78%) of those setting quit dates were aged 18-59 years: 1% were under 18, 22% were aged 18-34, 26% were aged 35-44, 30% were aged 45-59, and 21% were aged 60 or over. 88% of those setting a quit date were White, and only 2% were from BMEG groups. 276 pregnant women set quit dates through the smoking cessation services.</td>
<td>Self reported 4 week quit rates at special services and intermediate services. Compared quit rates between specialist services and intermediate services Length of follow-up: 4 weeks. 27% lost to follow up; fewer were lost to follow-up at specialist services (24%) than intermediate services (30%). Length of follow-up: 52 weeks. 18% of all clients were lost to follow-up after 52 weeks</td>
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<td>Results pertain to HAZs only: At the 4 week follow-up 39% (5,761/14,598) of all those setting a quit date had successfully quit (based on self-report). The success rate was 49% for specialist services and 34% for intermediate services. At 52 weeks follow up 13% (out of 14,598) were still quit In general, success at 4 Weeks increased with age, from 28% for the under 18s to 47% for those aged 60 and over. The 4 week success rates were similar for men and women (41% and 38% respectively). The 4-week quit rate for pregnant women was 35%.</td>
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<td></td>
<td>NHS stop smoking services monitoring data – directly applicable to UK setting.</td>
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<td></td>
<td>Services appear to be using different baselines to measure success. A successful quitter at 4 weeks is actually defined as someone who had not smoked at all since 2 weeks after quit date Missing data: some clients were not asked to undertake CO validation. 5% of people setting a quit date at all services from all health authorities reported ethnicity as “Not Known”. The quality of this data is therefore significantly compromised.</td>
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<td>Services</td>
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<td>directly applicable to UK setting.</td>
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</table>

Services appear to be using different baselines to measure success.

A successful quitter at 4 weeks is actually defined as someone who had not smoked at all since 2 weeks after quit date.

Missing data: some clients were not asked to undertake CO validation.

5% of people setting a quit date at all services from all health authorities reported ethnicity as “Not Known”. The quality of this data is therefore significantly compromised.

<table>
<thead>
<tr>
<th>All smokers accessing (defined by setting a quit date) NHS services.</th>
<th>To provide analysis of monitoring returns (quit dates set and 4 week success rates) between April 2000 and March 2001, based on quarterly reports</th>
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</thead>
<tbody>
<tr>
<td>132,500 people set a quit date through the services</td>
<td>Power calculations</td>
</tr>
<tr>
<td>48,582 (37%) people set quit dates through the specialist services. 83,962 (63%) set quit dates through the intermediate services; around 1900 pregnant women separately identified as setting quit dates through smoking cessation services</td>
<td>Percent of successful quits. Successful quits are self reported and CO validated in specialist services. Successful quits are self reported only in Intermediate services.</td>
</tr>
<tr>
<td>Compared quit rates between specialist services and intermediate services</td>
<td>Compared quit rates between HAs and HAZs 4 weeks follow up, 22% lost to follow up: 20% at specialist services and 22% at intermediate services.</td>
</tr>
<tr>
<td>The number of clients setting a quit date in the Health Action Zones increased from 14,600 in 1999/00 to 80,500 in 2000/01. The success rate at 4 week follow-up (self-report) was higher in 2000/01 (46%) than in 1999/00 (39%) and the percentage lost to follow-up lower (22% and 27% (respectively).</td>
<td></td>
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<tr>
<td>In general, success at 4 weeks increased with age, from 34% for the under 18s to 53% for those aged 60 and over. The 4 week success rates were similar for men and women (50% and 47% respectively). The 4 week quit rate for pregnant women was 41%</td>
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</table>

Success rate at 4 weeks follow up was 64,600/132,500 (49%)

At 4 weeks follow-up the success rate was 55% for specialist services, 45% for intermediate services

43% of those setting a quit date through Specialist services (out of 48,582) had their non-smoking status confirmed by CO validation.
No longer monitoring results for different models of services (i.e. specialized versus intermediate) and 52 week follow-up were dropped.

This third bulletin covers smoking cessation services in all HAs and HAZ between April 2001 and March 2002.

During the year 2001/02, a total of around 227,300 people set a quit date through smoking cessation services. Nearly three fifths (57%) of those setting quit dates were women, although the prevalence of smoking is similar for men (29%) and women (25%). The majority (81%) of those setting quit dates were aged 18-59 years: 1% were under 18, 25% were aged 18-34, 25% were aged 35-44, 31% were aged 45-59, and 18% were aged 60 or over.

94% of those setting a quit date were white, only 1% were from mixed, Asian or black groups respectively.

To provide analysis of monitoring returns (quit dates set and 4 week success rates) between April 2001 and March 2002, based on quarterly reports

Percent of successful quits.
Successful quits are self reported and CO validated.
Length of follow-up: 4 weeks, a fifth (22%) of all those setting a quit date were lost to follow-up

At the 4 week follow-up around 119,800 (53%) of all those setting a quit date had successfully quit (based on self-report).

CO validation was attempted on around 89,900 (40%) of clients setting a quit date. Around 79,800 (35%) of those setting a quit date had their non-smoking status confirmed by CO validation.

CO validation was attempted on about 1,100/4000 (28%) of all pregnant women and around 980 (24%) of those setting a quit date had their non-smoking status confirmed by CO validation.

The number of people who successfully quit at the 4 week follow-up (self-report) has increased from around 64,500 in 2000/01 to 119,800 in 2001/02, an increase of 86%.

The number of people who reported having successfully quit at the 4 week follow-up in HAZs increased by 42% (from around 37,400 in 2000/01 to 53,200 in 2001/02) and by 145% in the other Has (from 27,200 in 2000/01 to 66,600 in 2001/02).

NHS stop smoking services monitoring data – directly applicable to UK setting.

Services appear to be using different baselines to measure success.

A successful quitter at 4 weeks is actually defined as someone who had not smoked at all since 2 weeks after quit date

Missing data: some clients were not asked to undertake CO validation.

5% of people setting a quit date at all services from all health authorities reported ethnicity as “Not Known”. The quality of this data is therefore significantly compromised.
<table>
<thead>
<tr>
<th>Smoking Cessation Programme</th>
<th>NHS Intensive Treatments</th>
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<td>Around 4,000 of those setting a quit date were pregnant women.</td>
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</table>
**Smoking Cessation Programme**

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<tr>
<th>10. DH 2003 England Case Report 3-</th>
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<tbody>
<tr>
<td>Smoking cessation services in England for 2002-2003: successful quitters at the 4 week follow-up. During the year 2002/03, a total of around 234,900 people set a quit date through smoking cessation services. Nearly three fifths (57%) of those setting quit dates were women, although the prevalence of smoking is similar for men (28%) and women (25%). The majority (82%) of those setting quit dates were aged 18-59 years: 1% were under 18, 28% were aged 18-34, 24% were aged 35-44, 29% were aged 45-59, and 18% were aged 60 or over. 94% of those setting a quit date were white, only 1% were from mixed, Asian, black and other groups respectively. Around 6,800 of those setting a quit date were pregnant women.</td>
</tr>
<tr>
<td>To provide analysis of monitoring returns (quit dates set and 4 week success rates) between April 2002 and March 2003, based on quarterly reports</td>
</tr>
<tr>
<td>Percent of successful quits. Successful quits are self reported and CO validated. Success rates in HAZs of 2002/03 compared to 2001-02. 4 weeks follow up, around 54,700 (23%) were lost to follow-up at 4 weeks.</td>
</tr>
<tr>
<td>At the 4 week follow-up around 124,100 (53%) of all those setting a quit date had successfully quit (based on self-report). CO validation was attempted on around 92,700 of the 124,100 clients who had successfully quit (self-report). 83,200 had their non-smoking status CO validated: 35% of those setting a quit date were CO validated as quit; 67% of those having self reported as quitting were CO validated as quit. The number of pregnant women who reported having successfully quit at the 4 week follow-up was around 3,000 (44%). CO validation was attempted on about 1,900 (28%) of all pregnant women and around 1,700 (25%) of those setting a quit date had their non-smoking status confirmed by CO validation. The number of people who successfully quit at the 4 week follow-up (based on self-report) increased by 92%, from around 64,600 in 2000/01 to 124,100 in 2002/03. The number of people that reported having successfully quit at the 4 week follow-up (based on self-report) in HAZ has risen by 38%, from around 37,400 in 2000/01 to 51,400 in 2002/03.</td>
</tr>
<tr>
<td>Services appear to be using different baselines to measure success. A successful quitter at 4 weeks is actually defined as someone who had not smoked at all since 2 weeks after quit date. Missing data: some clients were not asked to undertake CO validation. 5% of people setting a quit date at all services from all health authorities reported ethnicity as “Not Known”. The quality of this data is therefore significantly compromised.</td>
</tr>
<tr>
<td>Citation</td>
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<tr>
<td>11. DH 2004 England Case Report 3-</td>
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<td>Citation</td>
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<td>12. DH</td>
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13. Ferguson  
2005  
England  
Cohort study  
2++  

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<tr>
<th>13. Ferguson</th>
<th>2005</th>
<th>England</th>
<th>Cohort study</th>
<th>2++</th>
</tr>
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</table>

Recipient of smoking treatment services who set a quit date between May and November 2002.  
2069 participants.  
6.3% were relatively disadvantaged (SES group 6)  
43.6% were male, 56.4% were female. Participants' ages were similarly distributed between 30 and over 61.

To examine the relationship between service-related characteristics and socio-demographic and behavioural factors with cessation outcomes (CO-validated quit rates at 52 weeks).

To compare characteristics of service users lost to follow-up with CO-validated quitters.

Power calculation not reported.

Department of Health's Policy Research Programme.

Clients were seen by trained advisers and set a quit date. Most received treatment on a weekly basis for typically 8 weeks, either one-to-one or group-based, combined with NRT or bupropion.

52 weeks; 37.5% lost to follow up.

One user in seven (14.6%) reported prolonged abstinence. This rose to 17.7% when self-report cases were included. Relapse rates between 4 and 52 weeks were almost identical between the two study areas—75%. Relapse was most likely to occur in the first 6 months following treatment. Users who self-reported quitting at 4 weeks were less likely (13.7%) than those with biochemical verification of smoking status at 4 weeks (25.2%) to be CO-validated quitters at 52 weeks ($P = 0.004$). Older users (OR 1.023; CI 1.014–1.032), people who smoke mainly for pleasure rather than to cope (OR 1.38; CI 1.02–1.87), and those who were extremely determined (OR 1.58; CI 1.21–2.05) were more likely to be quitters at 52-week follow-up, whereas those with lower socio-economic status (OR 0.86; CI 0.78–0.96), who smoked their first cigarette of the day within 5 minutes of waking (OR 0.73; CI 0.55–0.96) or had another smoker in their household (OR 0.65; CI 0.49–0.86) were less likely. In contrast, users lost to follow-up tended to be younger and experienced different referral pathways than CO-validated quitters. Gender nor any key characteristics of intervention, such as group or one-to-one counseling, were statistically associated with quitting.

These results obtained from routine services are consistent with those obtained from clinical trials in relation to abstinence at one year. Given that a high proportion of smokers relapsed between 4 weeks and 1 year it is important that future assessments of longer-term outcomes are conducted. However, following-up service users many months after an intervention is expensive, and reasonable estimates of quit rates can be estimated from short-term outcomes, provided that they have been CO-validated. Future studies should monitor outcomes from a selection of services treating different groups of smokers, particularly if more is to be learned about the role of smoking treatment services in reducing inequalities in health.

A very comprehensive analysis which provides the most complete biochemically validated information available on the long-term success of the services.
<table>
<thead>
<tr>
<th>Smoking Cessation Programme</th>
<th>NHS Intensive Treatments</th>
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<tbody>
<tr>
<td><strong>Inclusion:</strong> Admitted to hospital with CVD or peripheral vascular disease, had smoked cigarettes in the month before admission, were willing to make a serious attempt to quit smoking after discharge.</td>
<td><strong>Exclusion:</strong> medical instability, alcohol or substance abuse, dementia, and schizophrenia.</td>
</tr>
<tr>
<td><strong>277 women, over 18 years</strong></td>
<td><strong>Mean age was 6.</strong></td>
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<tr>
<td><strong>Smoking cessation and relapse prevention intervention (brief physician counseling and usual care plus nurse managed, cognitive behavioural, relapse prevention intervention given before discharge, 5 structured telephone contacts 2–90 days after discharge, and relapse management counseling as needed) (n = 142) or usual care (brief physician counseling, a self help pamphlet, and a list of community resources) (n = 135).</strong></td>
<td><strong>30 months for 89% follow up rate.</strong></td>
</tr>
<tr>
<td><strong>Power calculation not reported</strong></td>
<td><strong>The intervention and usual care groups did not differ for rates of 7 day point prevalence for non-smoking (based on self report of not having smoked in the past 7 days, which was verified by cotinine tests, family, or friends)</strong></td>
</tr>
<tr>
<td><strong>National Heart, Lung, and Blood Institute; nicotine patches donated by Hoechst, Marion and Rousseau and SmithKline Beecham.</strong></td>
<td><strong>In women admitted to hospital with cardiovascular disease, a nurse managed, cognitive behavioural, smoking cessation and relapse prevention programme did not reduce smoking rates at 12 months beyond levels achieved by usual care.</strong></td>
</tr>
<tr>
<td><strong>A good quality RCT. However, it should be noted that rather than offering NRT as an aid to smoking cessation from the beginning of the intervention, NRT was offered by WINS nurses only to women who relapsed to smoking, NRT was therefore a predictor of relapse rather than a predictor of smoking cessation.</strong></td>
<td><strong>Page 88 of 136</strong></td>
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<tr>
<td>Study</td>
<td>Data</td>
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<td>15. Hand, S et al</td>
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</table>

Follow up at 1 week, 3 months, 6 months and 1 year by CO testing. Follow up rate not reported. In hospital patients NRT, given as regular daily patches plus an inhalator to be used as needed, did not add to the smoking cessation rate achieved at 1 year by regular advice and support, despite significantly increasing the cessation rate at 1 week.
To evaluate the existing workload, the effectiveness and the efficiency of the Kingston and Richmond Stop Smoking Service. To follow up clients through a survey in order to measure the number of quitters at 52 weeks and their perception of the Stop Smoking Service. To identify areas for improvement through surveys of advisors and clients and through analysis of existing client group session evaluations.

Analysis of Stop Smoking Database: 1316/2633 smokers quit at 4 weeks, overall success rate is 50%. 80/227 (35%) people followed up at 52 weeks were still not smoking. There are no significant differences in the number of 4-week quitters that stayed quit at 52 weeks between the two PCTs (47% in KPCT vs. 58% in RTPCT), nor significant differences in service type.

Main Results

Directly relevant to UK population.

Although a reasonable study given the difficulties associated with long term follow up, 52 quit rates need to be taken with caution given the different ways clients were approached (telephone vs. letter).
<table>
<thead>
<tr>
<th>Citation</th>
<th>Study population</th>
<th>Research question</th>
<th>Intervention</th>
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<tr>
<td>17. Judge 2005</td>
<td>Recipient of smoking treatment services who set a quit date between October 2001 and March 2003</td>
<td>To examine the impact of socio-demographic factors, smoking-related behaviour and service characteristics on CO-validated quit rates at 4-week follow-up in English smoking treatment services, and to compare the results with those for self-reported quitters.</td>
<td>Typically, smokers were seen by smoking cessation advisers 1 week (maximum 2 weeks) before quitting and at weekly intervals for 4 weeks after quitting, although contacts were sometimes more or less frequent than this. NRT treatment started typically on the quit date, and bupropion treatment 10 days beforehand. Both continued at weekly intervals for typically 8 weeks. 4 weeks; 20.6% lost to follow-up.</td>
<td>More than one-half of clients (53%) were CO-validated as quitters at 4 weeks, rising to 60.7% when self-reported cases were included. Age (OR 1.026; CI 1.022–1.029) and being extremely determined to quit (OR 1.46; CI 1.26–1.71) were associated positively with CO-validated cessation, whereas women (OR 0.85; CI 0.77–0.94), users with lower socio-economic status (OR 0.92; CI 0.88–0.95), those smoking 31 or more cigarettes daily (OR 0.75; CI 0.64–0.88) and those with relatively poor health status (OR 0.72; CI 0.63–0.82) were less likely to quit. Although the vast majority of users received one-to-one support, those who had group counseling were more likely to be successful in their quit attempt (OR 1.38; CI 1.09–1.76). Self-report and CO-validated quitters were similar in terms of their characteristics.</td>
<td>These results obtained from routine services support those obtained from clinical trials and confirm the effectiveness of counseling combined with pharmacotherapies to assist smokers to quit in the short term. However, the relative effectiveness of group interventions raises questions about why one-to-one counseling is used much more commonly. The importance of sociodemographic and nicotine-related dependency factors also suggests that local service targets for smoking cessation need to take account of the social distribution of these characteristics.</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>18. Lowey 2002 England Correlational Analysis 2++</td>
<td>Patients accessing the services over the age of 18, residents within the NW region of England, setting a quit dated between January 2000 and September 2001. 43020 smokers’ records</td>
<td>Aimed to establish whether NHS smoking cessation services across the North West region make a significant contribution to promoting equity of access to health care and to reducing inequalities in health. Power calculation not reported.</td>
<td>NHS SSS: determine if the proportion of people who set a quit date differed by sex, age, deprivation of those who set quit dates. Compared the proportion of people who set a quit date to the NW's population; 26.2% were lost to follow up.</td>
<td>Younger smokers were less likely to set a quit date. Higher proportion of estimated smokers in the NW who set a quit date were female. 50% of all smokers setting a quit date lived in the most deprived areas, while only 25% of people in the NW are living in deprived areas. An estimated 3.3% (43,020/1.3 million) of smokers in the NW set a quit date, 48.5% of them successfully quit (at 4 weeks). Smokers living in deprived areas do not achieve greater success rates compared to those in more advantaged areas (p=0.16)</td>
<td>*Directly relevant SSS across the NW are attracting those living in deprived areas but are not achieving comparable successful quit rates compared to more prosperous areas. The services are not attracting and maintaining contact with younger smokers. SSS need to re-address this issue by identifying how the services could better meet the needs of the most disadvantaged and younger people.</td>
<td>A very comprehensive study that provides important information on whether the stop smoking services are reducing health inequalities in the NW. No methodological concerns.</td>
</tr>
<tr>
<td>Citation</td>
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<td>19. MacAskill 2005 England Qualitative &amp; correlational analysis 2++</td>
<td>16 prisons in the North West of England representing a range of prison categories and PCTs. 1,581 prisoners were recorded as setting a quit date in 2004-05. Prisoners were those local/remand prisons, category B, C and D prisoners, young offenders and female prisoners.</td>
<td>To explore the impact of DH funded provision of NRT in HM prisons. No power calculation Funded by the Department of Health and Prison Health</td>
<td>Delivery models: 1) Group support with enhanced one-to-one support in parallel for some individuals 2) Group support only 3) One-to-one only 4) Combination of group and one-to-one in programme 4 weeks follow up 80% followed up.</td>
<td>642 prisoners were reported as remaining quit at four weeks (based on CO validation); this was 41% of those who set a quit date. 324 prisoners were lost to four week follow-up (20% of those participating). The highest overall four week quit rate in one prison for the year was 64%. Quarterly quit levels in individual prisons tended to improve over the year, especially where services were well established.</td>
<td>As the study took place within the UK prison population it is directly relevant to the UK setting. It provides important evidence that smoking cessation support in prisons can be effective.</td>
<td>A comprehensive study. No methodological concerns – the results seem reliable as they were CO validated. However, the author does not disaggregate the quit rates by sex – it would have been useful to know if there were gender differences in quit rates or the numbers of people attending smoking cessation programmes.</td>
</tr>
<tr>
<td>Citation</td>
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<td>20. May et al 2006 England RCT 1++</td>
<td>564 participants. 238 in the intervention &quot;buddy condition&quot;; 326 in control group (same treatment without the buddy component). There were 350 (62%) women, 395 (70%) participants were married or living with a partner; 475 (84%) were in paid employment; the mean age was 43.6 years (S.D.=12.4). Mean daily cigarette consumption was 23 (S.D.=8.6) and mean expired carbon monoxide (CO) concentration on their quit date was 28.8ppm (S.D.=12.5); the mean Fagerstrom Test for Nicotine Dependence (FTND) score was 5.6 (S.D.=2.3). The average number of previous serious quit attempts was 3.4 (S.D.=5.3).</td>
<td>To assess the effectiveness of including a social support intervention ('buddy system') in a group treatment programme to aid smoking cessation. The study was powered to detect a difference in the effect of the buddy system after 4 weeks of continuous abstinence. Assuming 40% abstinence in the controls and 50% in the buddy condition the power to detect this size of difference was 80% Funding not reported.</td>
<td>At weekly stop smoking support groups methods to avoiding and combating urges to smoke were shared and discussed. In addition, participants chose a buddy and called each other alternating between them every day for the first week. No particular training or advice was given to smokers about the content of these calls they were simply described as a way of buddies offering mutual support between visits. Abstinence between participants in the buddy condition and the control condition at 1 week, 4 weeks and 26 weeks after the quit date follow up (100% follow up rate).</td>
<td>78 participants (14%) reported continuous abstinence at 26 weeks: 15% (n=48) of those in the solo condition and 13% (n=30) of those in the buddy condition. This difference was not significant. 35% of the sample (n=194) were continuously abstinent to the 4-week follow-up: a higher proportion of those in the buddy condition than the solo condition (39%, n=92 versus 31%, n=102). Two hundred and seventy-five (49%) participants were abstinent for the first week of treatment: 56% (n=133) of buddy participants and 44% (n=142) of solo participants. These differences were not significant.</td>
<td>Directly relevant to UK setting. The buddy system did not represent a significant addition to group smoking cessation treatment; although these results cannot be generalised to include smokers in other situations such as individual treatment or self-help programmes. Despite the lack of effect on abstinence rates the buddy intervention was effective in increasing the individual's perception of social support, with members of the buddy group reporting a greater sense of having someone to turn to on their quit dates. However, it is not known if this effect was sustained</td>
<td>A good quality RCT. No methodological concerns.</td>
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<td>Citation</td>
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<td>21. McEwen et al 2006 England Correlational Analysis 2++</td>
<td>Registrants with stop smoking services in 4 outer London boroughs who set a quit date. 1501 participants: 822 were treated in groups by clinic staff and 679 received one-to-one treatment from Community Advisers (CA). CA attracted significantly more clients from black and minority ethnic groups, those with a lower education and those entitled to free prescriptions than the clinic. Clients attending for one-to-one treatment also had stopped smoking for a longer time in previous quit attempts and were more likely to smoke hand-rolled cigarettes than those in group treatment.</td>
<td>Explores the most effective form of psychological treatment to aid smoking cessation: group treatment provided by specialists or one-to-one treatment provided in the community by primary care nurses or pharmacists. Self-funded.</td>
<td>The stop smoking services are comprised of clinics (group) and community (one-to-one) treatments. Two outcomes were used: CO-validated continuous 4-week abstinence and CO-validated abstinence on weeks 3 and 4 after the quit date. Correlational analysis: therefore, no direct comparisons were made.</td>
<td>30% (n=244) of group clients were CO-validated abstinent at 4 weeks after their quit date compared with 19% (n=126) of one-to-one clients (Fisher's exact&lt;.001). 42% (n=348) of clinic clients treated in groups were abstinent for weeks 3 and 4 compared with 32% (n=214) of the clients treated one-to-one in the community (Fisher's exact&lt;.001). If CO-validated abstinence at weeks 3 and 4 is redefined as self-report at week 3 plus CO-verified at week 4 (as permitted by the Department of Health in its definition of abstinence), then the abstinence rate increases to 39% (n=589), 43% for groups and 35% for one-to-one (Fisher's exact=.001), 9% (n=44) of the clients who were smoking at weeks 1 and 2 post quit were abstinent at weeks 3 and 4 (CO-validated); there was no significant difference in the abstinence rates of these clients whether they were treated one-to-one or in groups (Fisher's exact=.876).</td>
<td>Directly relevant to UK setting. Study suggests that treatment type predicts end of treatment abstinence. The findings indicates that receiving behavioural support for smoking as part of a group significantly increases smokers' chances of success as opposed to receiving individual one-to-one treatment.</td>
<td>Although it is possible that there are some differences between the treatment provided by community advisors and clinic staff, the study does provide a strong justification for demonstrating equivalence between these two types of treatment deliverers. No methodological concerns.</td>
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<td>Citation</td>
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<td>22. Nagle, A. 2005 Australia RCT 1++</td>
<td>Consecutive patients admitted to the hospital over 12 months in 1997, who reported being smokers in the preceding 12 months. 1422 inpatients, 711 in control group, 711 in interventions group. There were more males in the intervention group (281 vs. 236), more aged over 70 years (134 vs. 103), and more employed (274 vs. 237).</td>
<td>Does the provision of nurse-lead intervention lead to smoking cessation in hospitals? Sample size of 700 was required to detect an absolute difference in smoking of 5% between control and intervention groups with a power of 80% and alpha of 95%. National Health and Medical Research Council.</td>
<td>Nurse-delivered intervention that incorporated tailored information, assessment of withdrawal, offer of nicotine replacement therapy, booklets, and a discharge letter. The control group received the usual care for smokers (no smoking assessment, minimal contact about smoking, no pharmacotherapy, no discharge plan, smoking not considered part of the drug and alcohol counselor’s role). Compared smoking cessation rates between intervention group and control group 3 and 12 months post discharge.</td>
<td>At 3 months there was no difference between intervention and control groups on self-reported point prevalence (27.3% vs. 27.5%) nor for continuous abstinence (18.5% vs. 20.6%). Findings were CO validated. At 12 months there was no difference between intervention and control groups on self-reported point prevalence of abstinence (19.5% vs. 21.9%) nor for continuous abstinence (11.7% vs. 13.9%) Findings were CO validated.</td>
<td>While this is not a UK bases study they compare their results to a UK-based study. It is likely that this type of intervention would be ineffective with UK patients as well.</td>
<td>A good quality RCT. No methodological concerns.</td>
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<td>23. NEPHO 2005 England Correlational analysis 2+</td>
<td>Data on clients accessing stop smoking services were extracted from individual services. 28473 records accessed. Records were excluded if age, sex or postcode were missing or incomplete.</td>
<td>The NE services have been effective in producing consistently higher than the national average annual smoking cessation rates at 4 weeks. This paper aims to find out if the services are effective in reducing health inequalities as define by: Age, Sex Ethnicity, and SES Power calculation not reported Smoke Free North East Office</td>
<td>Compared access to services to smoking prevalence in a number of groups. Follow up not applicable.</td>
<td>Six percent of North East smokers set quit dates each year. A higher proportion of smokers are quitting through these services in the more deprived areas than affluent ones. These services are therefore appropriately targeted to reduce socioeconomic inequalities. A higher proportion of female smokers are quitting, but this is not statistically significant at 52 weeks; and so services may be contributing to reducing the gender inequality in smoking. Services are not attracting younger smokers very well and so are not affecting age inequalities. Smokers from Black and Minority Ethnic groups appear less likely to access services but the small numbers make interpretation more difficult than for other inequalities.</td>
<td>Directly relevant to UK setting. SSS across the NE are attracting those living in deprived areas but are not achieving comparable successful quit rates compared to more prosperous areas. The services are not attracting and maintaining contact with younger smokers. SSS need to re-address this issue by identifying how the services could better meet the needs of the most disadvantaged and younger people.</td>
<td>Missing data was not accounted for in the analysis, which may have affected the findings of the study.</td>
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<tr>
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<td>24. Quist-Paulsen 2003 Norway RCT 1++</td>
<td>240 smokers aged under 76 years, daily smokers, admitted for myocardial infarction, unstable angina, or cardiac bypass surgery. 118 were randomly assigned to the intervention and 122 to usual care (control group). Education and working status differed slightly between the two groups at baseline (table 1). Overall, 87% (n = 101) of patients in the intervention group and 93% (n = 114) in the control group had smoked in the 24 hours before admission. Mean age 57; 76% in interventions group were men, 75% in control group were men.</td>
<td>To determine whether a nurse led smoking cessation intervention affects smoking cessation rates in patients admitted for coronary heart disease (CHD). Aims to detect a 20% difference between the two groups. With a power of 80% (Beta = 0.2) and an alpha of less than 0.05, 98 patients were needed in each group (_2, two tailed test, Sample Power version 1, SPSS, Chicago). Outcome measure: 12 month smoking cessation rates determined by self report &amp; biochemical verification.</td>
<td>Intervention was based on a booklet and focused on fear arousal and prevention of relapses. The intervention was delivered by cardiac nurses without special training. 5 month follow up: 22/240 (9%) were lost to follow up.</td>
<td>12 months after admission to hospital, 57% (n = 57/100) of patients in the intervention group and 37% (n = 44/118) in the control group had quit smoking (absolute risk reduction 20%, 95% confidence interval 6% to 33%). The number needed to treat to get one additional person who would quit was 5 (95% confidence interval, 3 to 16). Assuming all dropouts relapsed at 12 months, smoking cessation rates were 50% in the intervention group and 37% in the control group (absolute risk reduction 13%, 0% to 26%).</td>
<td>Not a UK population. However, the results are likely to be broadly applicable to the UK setting.</td>
<td>A good quality RCT. No methodological concerns.</td>
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Citation: 25. Rice & Stead 2004

Study population: Participants were adult smokers, 18 years and older, of either gender recruited in any type of healthcare setting. The only exception was studies that only recruited pregnant women.

Research question: To determine the effectiveness of smoking cessation interventions delivered by nurses on smoking behaviour in adults.

Intervention: Included cessation studies that compared usual care with an intervention, brief advice with a more intensive smoking cessation intervention or different types of intervention. Advice was defined as verbal instructions from the nurse to 'stop smoking' whether or not information was provided about the harmful effects of smoking. Interventions were grouped into low intensity (trials where advice was provided during a single consultation lasting 10 minutes or less with up to one follow-up visit) and high intensity (trials where the initial contact lasted more than 10 minutes, there were additional materials and/or strategies other than simple leaflets, and usually more than one follow-up contact) for comparison.

Main results: Twenty studies comparing a nursing intervention to a control or to usual care found the intervention to significantly increase the odds of quitting (Peto Odds Ratio 1.47, 95% CI 1.29 to 1.68). There was heterogeneity among the study results, but pooling using a random effects model did not alter the estimate of a statistically significant effect. There was limited evidence that interventions were more effective for hospitalised patients with cardiovascular disease than for inpatients with other conditions. Interventions in non-hospitalised patients also showed evidence of benefit. Five studies comparing different nurse-delivered interventions failed to detect significant benefit from using additional components. Five studies of nurse counselling on smoking cessation during a screening health check, or as part of a multifactorial secondary prevention in general practice (not included in the main meta-analysis) found the nursing intervention to have less effect under these conditions.

Applicability to UK: The results from this study that discuss nursing delivered interventions seem broadly applicable to the UK population and speak to the value of conducting intensive inpatient smoking cessation interventions in secondary care.

Confounders: No methodological concerns.
<table>
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<td>26. Rigotti et al 2002 International Cochrane review 1++</td>
<td>Participants were patients who were hospitalised, or about to be hospitalised and who were currently smoking or had recently quit. The studies took place in a range of countries from the USA, the UK, Spain, and Canada.</td>
<td>To determine the effectiveness of smoking cessation interventions for hospitalised patients</td>
<td>Any intervention to increase motivation, to assist a quit attempt or help recent quitters avoid relapse. Intervention could be delivered by physicians, nursing staff, psychologists, smoking cessation counsellors or other staff. Intervention could include advice or more intensive behavioural therapy with or without the use of pharmacotherapy or post-discharge follow-up. Interventions during the hospital stay were categorised according to whether they included follow-up after discharge. 4 categories of intervention intensity: 1) 1 contact in hospital setting lasting &lt;=15 minutes, no follow-up support, 2) 1 or more contacts in hospital lasting in total &gt;15 mins, no follow-up support, 3) Any hospital contact plus follow-up &lt;=1 month, 4) Any hospital contact plus follow-up &gt;1 month.</td>
<td>Intensive intervention (inpatient contact plus follow-up for at least one month) was associated with a significantly higher quit rate compared to control (Peto Odds Ratio 1.82, 95% CI 1.49-2.22, six trials). Interventions with less than a month of follow-up did not show evidence of significant benefit (Peto Odds Ratio 1.09, 95% CI 0.91-1.41, seven trials). There was no evidence to judge the effect of very brief (&lt;20 minutes) interventions delivered only during the hospital stay. Longer interventions delivered only during the hospital stay were not significantly associated with a higher quit rate (Peto Odds Ratio 1.07, 95% CI 0.79-1.44, three trials). Although the interventions increased quit rates irrespective of whether NRT was used, the results for NRT were compatible with other data indicating that it increases quit rates. There was no strong evidence that clinical diagnosis affected the likelihood of quitting.</td>
<td>The results from a number of international settings seem broadly applicable to the UK population and speak to the value of conducting intensive inpatient smoking cessation interventions in secondary care.</td>
<td>No methodological concerns.</td>
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<td>Jahr</td>
<td>Schulz, 2005 Scotland Qualitative &amp; correlational analysis</td>
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<td>114 respondents from the NHS Argyll and Clyde smoking cessation groups, total of 67 attendees: 49 were female and 18 were male, most attendees were between 30 and 69. 5 interviews with group facilitators. 10 in-depth interviews with potential clients. 11 in-depth interviews with clients who attended at least 3 group sessions between June and December 2003.</td>
<td>To evaluate the effectiveness of Narrative Therapy called “Smokey Joe” in smoking cessation in Barrhead in 3 stages: 1. process evaluation of Smokey Joe and impact evaluation based on participants and facilitators perceptions, 2. develop and implement a pilot training programme on Narrative Therapy, 3. evaluate implementation of the program Power calculations not applicable</td>
<td>A group based therapy that uses narratives of smoking and quitting of the group members as a resource for giving up smoking. 15 months for 45/114 (39% follow up rate).</td>
<td>Analysis of 45 respondents, there was quit rate 16%, this rate compared favourably with rates from other services. Clients appreciate that the Barrhead service gives them freedom to choose Smokey Joe or traditional service. Qualitative data shows that clients rate the flexibility and open-ended nature of Smokey Joe very highly. Among clients who attended the group at least three times there was an overall reduction in smoking in 2 clients, quit attempts sustained in 9 clients</td>
<td>Indicates some early success in relation to quit rates, as well as accommodating those clients who would normally be rejected by services. Offers in-depth guidance on how to approach the decision to quit. Clients are responsive and value the new method and quit rates are equivalent to other services. Caters for clients who would be rejected (they have not made a definite decision to quit) by services who use “stages of change.” Allows for the groups “agenda” to be tailored to meet the clients’ current needs.</td>
<td>Small scale study. Qualitative elements are thorough but the outcomes and client profile element are weak.</td>
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Indicates some early success in relation to quit rates, as well as accommodating those clients who would normally be rejected by services. Offers in-depth guidance on how to approach the decision to quit. Clients are responsive and value the new method and quit rates are equivalent to other services. Caters for clients who would be rejected (they have not made a definite decision to quit) by services who use “stages of change.” Allows for the groups “agenda” to be tailored to meet the clients’ current needs.

Small scale study. Qualitative elements are thorough but the outcomes and client profile element are weak.
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<td>28. Sinclair 2004 UK Cochrane Review 1++</td>
<td>Community pharmacy clients who are smokers and who wish to stop RCTs were included for review</td>
<td>This review assesses the effectiveness of interventions by community pharmacy personnel to assist clients to stop smoking.</td>
<td>Any intervention by community pharmacy personnel to promote smoking cessation amongst their clients. The intervention may have been delivered by one or more pharmacists and/or members of pharmacy staff. They may have included advice or more intensive behavioural therapy, with or without the use of any form of NRT or other pharmacotherapy. The control intervention may have been usual pharmacy support or any less intensive programme. Pharmaceutical trials which compared only NRT with a control in the community pharmacy setting did not fall within the scope of the review.</td>
<td>Two trials met the selection criteria. They included a total of 976 smokers. Both trials were set in the UK and involved a training intervention which included the Stages of Change Model; they then compared a support programme involving counseling and record keeping against a control receiving usual pharmacy support. In both studies a high proportion of intervention and control participants began using NRT. Both studies reported smoking cessation outcomes at three time points. However, follow-up points were not identical (three, six and 12 months in one, and one, four and nine months in the other), and the trend in abstinence over time was not linear in either study, so the data could not be combined. One study showed a significant difference in self-reported cessation rates at 12 months: 14.3% versus 2.7% (p &lt; 0.001); the other study showed a positive trend at each follow-up with 12.0% versus 7.4% (p=0.09) at nine months.</td>
<td>The findings of this study that trained community pharmacists may have a positive effect on smoking cessation rates, is directly relevant to the UK population.</td>
<td>No methodological concerns.</td>
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<td>29. Smith 2006 England Retrospective health equity audit – postal questionnaire Cohort study 2+</td>
<td>Clients accessing the Blackpool, Fylde and Wyre NHS Stop Smoking Service 500 clients sampled. Response rate: 41%</td>
<td>How fairly are smoking cessation services distributed in relation to the health needs of different groups and areas? No funding source identified.</td>
<td>NHS stop smoking intervention Comparison between success rates of people from deprived and non-deprived areas 52 week follow up.</td>
<td>Quit rate at 52 weeks was 41.7%; however, this reduced to 16.8% assuming that all non-responders had resumed smoking.</td>
<td>Directly applicable to UK setting. Indicates that at 52 week follow up the abstention rate falls to 16.8%.</td>
<td>Audit only correlates quitting status with level of deprivation and does not consider confounding factors such as gender or age.</td>
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<td>30. South Gloucestershire PCT 2005 England Retrospective health equity audit – Correlational analysis of client database 2+</td>
<td>Clients accessing the South Gloucestershire Smoking Cessation Service Of 1,894 records 87% (1,657) were analysed</td>
<td>How fairly are smoking cessation services distributed in relation to the health needs of different groups and areas? No funding source identified</td>
<td>NHS stop smoking intervention Comparison between success rates of people from deprived and non-deprived areas</td>
<td>Percentage of successful quitters from 1st quintile (least deprived): 55% 2nd quintile: 52% 3rd quintile: 54% 4th quintile: 49% 5th quintile (most deprived): 48%</td>
<td>Directly relevant to UK setting. Demonstrates that quitters from more deprived groups are less successful than quitters from less deprived groups</td>
<td>Audit only correlates quitting status with level of deprivation and does not consider confounding factors such as gender or age.</td>
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<td>31. West, R 1998 England RCT 1++</td>
<td>N=172 smokers recruited through their general practice in SE London. 58 men and 114 women. Equiprobable assignment of pairs of smokers to “buddy” or “solo” conditions. 35 pairs entered into buddy and 51 entered into solo. There was no significant difference between the two groups.</td>
<td>To assess the abstinence rates of pairing up smokers attending a general practice smokers clinic to provide mutual support between clinic sessions. Funding not mentioned.</td>
<td>All patients were advised to take some form of NRT. They all attended private sessions with a clinic nurse 1 week prior to their quit date, on the quit date, 1 week later and 3 weeks after that to discuss setting quit dates, the importance of quitting and to provide general support, they were seen in pairs and individually depending on their group assignment. Compared CO validated quit status between buddy and solo groups at 4 weeks.</td>
<td>Smokers abstinent at the end of the treatment was significantly higher in the buddy condition than the solo condition (27% vs. 12%).</td>
<td>This study is directly applicable to the UK population. A buddy system can provide an effective element of a smoking cessation intervention at minimal cost.</td>
<td>No methodological concerns.</td>
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<td>32. Watt, A 2005 England Cohort study 2-</td>
<td>Users of Cornwall SSS 3818 clients in phase 3</td>
<td>To monitor people in Cornwall and the Isles of Scilly who have used the SSS and to assess how successful the services have been in helping them stop smoking To evaluate reason why people may have started smoking again after using the SSS, how clients became aware of the SSS, the frequency of contact with the SSS during the quit attempt Power calculation not applicable Cornwall Health Research Unit</td>
<td>NHS stop smoking services Comparing client quit rates between 3 phases, 1999-2000, 2000-2002 and 2003 and 2004. 52 week follow up for 551 questionnaires completed/3818 clients contacted</td>
<td>23.4% were successful in quitting after 52 weeks Between phase 1 and phase 3 there was a 5.1% increase in successful quitters Most frequent reason given for restarting smoking after attempting to quit were stress at home, lack of willpower and enjoyment The majority of clients became aware of the SSS through personal contacts (GPs or friends etc.) (69.5%). The majority of clients first contacts with the SSS took place at the GP surgery (84.9%)</td>
<td>The Cornwall Stop Smoking Services continues to provide an effective service recording a 23% success rate of those using the services The most useful aid for successful clients is NRT The majority of clients (over 90%) found all aspects of the SSS helpful Only a few clients used group therapy. Only 23/551 clients answered the question about group therapy.</td>
<td>The researchers used quota sampling, and kept ringing up people until they got enough from each of the groups they were trying to reach. This is a slightly questionable approach bound to include those easiest to reach and possibly exclude more disadvantaged groups who may still be smoking. This may be one explanation for their high success rate.</td>
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### 7. APPENDIX A – Excluded studies

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<tr>
<th>Excluded Papers</th>
<th>Reason for exclusion</th>
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<tbody>
<tr>
<td>6. McLeod, D; Benn, C; Pullon, S; Viccars, A; White, S; Cookson, T; Dowell, A (2003) The midwife’s role in facilitating smoking behaviour change during pregnancy. Midwifery, 19: 285-97.</td>
<td>Not a UK study</td>
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<th>Excluded NRR Studies</th>
<th>Reason for exclusion</th>
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<tr>
<td>Agomo, M.C., A survey to investigate current smoking cessation services by community pharmacists in an inner city area. Complete.</td>
<td>not directly relevant to review</td>
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<tr>
<td>Amos, A. Developing effective and sustainable health promotion practice in primary care: LHCC’s and new smoking cessation services. Complete.</td>
<td>not directly relevant to review</td>
</tr>
<tr>
<td>Ashwin, C. An exploration of women's views regarding the use of Nicotine Replacement Therapy during pregnancy. Complete.</td>
<td>not directly relevant to review</td>
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<tr>
<td>Batten, D.L., Low income, smoking and pregnancy.</td>
<td>too early to be of</td>
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<td>Reference</td>
<td>Study Title</td>
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<tr>
<td>Beer, M.H.</td>
<td>Survey to assess the satisfaction of clients who have received support from the Gloucestershire Smoking Advice Service during their quit attempt. Complete.</td>
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<tr>
<td>Bell, M.N.</td>
<td>Baseline Survey: Smoking Cessation in a Maternity Care Setting. Complete.</td>
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<tr>
<td>Bond, D.C.M.</td>
<td>An assessment of the value of intensive pharmaceutical intervention in assisting people to stop smoking. Complete.</td>
</tr>
<tr>
<td>Cook, M.T.</td>
<td>Survey to assess the satisfaction of clients who have received support the Gloucestershire Smoking Advice Service during their quit attempt. Complete.</td>
</tr>
<tr>
<td>Copeland, M.L.</td>
<td>How effective are nicotine replacement patches in a socially and economically deprived population? Complete.</td>
</tr>
<tr>
<td>Courtney, M.D.</td>
<td>Evaluation of stop smoking support service within the Hull and East Riding Community Health Trust. Complete.</td>
</tr>
<tr>
<td>Davies, M.E.</td>
<td>An evaluation of patient satisfaction with an LHCC wide smoking cessation programme. Complete.</td>
</tr>
<tr>
<td>Davies, M.L.</td>
<td>An assessment of midwives' ability to influence smoking behaviour of pregnant women following smoking cessation training in the stages of change model. Complete.</td>
</tr>
<tr>
<td>Davies, M.L.</td>
<td>An investigation into the patterns of smoking behaviour of pregnant smokers and the impact of smoking cessation training for midwives at Llandough Hospital. Complete.</td>
</tr>
<tr>
<td>Gilbert, D.H.</td>
<td>An exploratory study assessing the current state of smoking cessation advice in pharmacies in Camden, Islington, Haringey and Barnet, and to test the feasibility of offering a computer based personalised feedback system in selected pharmacies. Complete.</td>
</tr>
<tr>
<td>Grant, M.E.</td>
<td>Intensive Community-Based Smoking Cessation Service Complete.</td>
</tr>
<tr>
<td>Gray, D.J.</td>
<td>Smoking Cessation in Wandsworth PCT. Complete.</td>
</tr>
<tr>
<td>Hapugoda, D.L.</td>
<td>Evaluating local enhanced service (LES) for smoking cessation service in primary care within St Albans and Harpenden PCT. Complete.</td>
</tr>
<tr>
<td>Hart, J.</td>
<td>Evaluation of access by deprived adults to smoking cessation services in S Cheshire 2000-01. Complete.</td>
</tr>
<tr>
<td>Marteau, P.T.</td>
<td>General Practitioners' and Practice Nurses' Beliefs about NHS Smoking Cessation Interventions. Complete.</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>McKeown, M.S.</td>
<td>Smoking and the unemployed: a qualitative study. Complete.</td>
</tr>
<tr>
<td>Michie, D.S.</td>
<td>Pilot Evaluation of a Community Pharmacy-based Smoking Cessation Service. Complete.</td>
</tr>
<tr>
<td>Murphy, M.J.</td>
<td>A Qualitative Study Evaluating Clients Interactions &amp; Experiences of an intensive Community Based Smoking Cessation Service at End of Year Contact. Complete.</td>
</tr>
<tr>
<td>Shahab, M.L.</td>
<td>Investigating Attitudes towards Smoking Cessation and Smoking Cessation Services: a qualitative study of current and former smokers. Complete.</td>
</tr>
<tr>
<td>Turner, M.K.</td>
<td>Are women aware of current resources available to enable them to quit tobacco smoking within the Camden &amp; Islington Community Health Services NHS Trust. Complete.</td>
</tr>
<tr>
<td>Vogt, M.F.</td>
<td>Smokers' beliefs about NHS smoking cessation interventions. Complete.</td>
</tr>
<tr>
<td>Walton, M.J.</td>
<td>Factors affecting the delivery and uptake of smoking cessation support in general practice: a study of primary care delivered services in Bradford. Complete.</td>
</tr>
<tr>
<td>Williams, M.J.</td>
<td>The qualitative experience of women quitting smoking through a national smoking cessation programme. Complete.</td>
</tr>
</tbody>
</table>
8. APPENDIX B – Relevant NRR studies: Reports unobtainable

   The main aim of the study is to understand why interventions at the NHS Smoking Cessation Services work for some people and not for others. In other words, we will identify factors, both in the short term (4 weeks) and long-term (6 months) that influence abstinence and relapse.
   Prospective cohort study using questionnaires.
   The study aims to recruit approximately 850 participants.
   Predictors of intervention effects are the primary outcome.
   N0632177580
   Avon Primary Care Research Collaborative
   South West Regional Office
   1/8/2005
   1/8/2006
   School of Psychology, University of the West of England, Frenchay Campus,
   Coldharbour Lane, Bristol, BS16 1QY, United Kingdom
   0117 328 2264
   0117 328 2904
   University of the West of England

   What is the effectiveness of a programme of Group Support and supervised use of Nicotine Replacement therapy in reducing the prevalence of cigarette consumption in a group of dependent motivated smokers?
   Non-randomised controlled trial. Participants receive an initial individual assessment, followed by 5 X Group Sessions with Nicotine Replacement therapy as appropriate and monthly follow-ups. A buddy system of peer support accompanies the course. Volunteer smokers known to the CHD and respiratory nursing services who are dependent and motivated to quit smoking and unable to quit with brief intervention alone.
   Carbon monoxide levels, prevalence of smoking during and after the intervention, drop-out rates
   N0043067426
   Barking and Dagenham Primary Care Trust and Havering Primary Care Trust
   London Regional Office
   15/1/2000
   30/9/2000
   Respiratory nurse, St George's Hospital, Sutton's Lane, Hornchurch, Essex, RM12 6RS, UK
   01708 465346

   How many patients give up smoking when seen by the counsellor (Advice + Support)?
   M0047025748
   South Bro Taf R&D Consortium
   Wales
   1/1/1996
   31/3/1996
4. Campbell, M.J., An action research project to identify factors associated with low uptake of Smoking Cessation Services among low income groups and to increase the subsequent uptake of services. Complete.

Why is there a low uptake of smoking cessation services among low income groups?

Action research

People who smoke aged 16 years and above.

Factors associated with attitudes and access of service provision among deprived communities in relation to smoking cessation

Bolton Primary Care Trust
North West Regional Office
1/8/2003
31/12/2003
Bolton Primary Care Trust, 3rd Floor, Lever Chambers for Health, Ashburner street, Bolton, BL1 1SQ, United Kingdom
01204 360052
01204 360055


Little is known about the current state of activity of pharmacists in the area of smoking cessation. The aim of this proposal is to assess the current level of service offered to clients for smoking cessation in community pharmacies in Camden, Islington, Haringey, Barnet and Enfield, to provide a complete picture of cessation activity in community pharmacy in the area.

Questionnaires.

Approximately 300 pharmacists will be invited to complete a questionnaire. Information gathered by questionnaire will include: practice site description and pharmacy environment; record keeping and internal organisational issues; level and extent of training; smoking cessation knowledge, attitudes; smoking cessation activities and content of advice; motivation of pharmacist to promote a smoking cessation service; and barriers to performing activities of the service.

North Central London Research Consortium
London Regional Office
1/12/2005
31/5/2006
Royal Free and University College Medical School, Royal Free Campus, Rowland Hill Street, London, NW3 2PF, United Kingdom
020 7794 0500 ext 8819
020 7794 1224


Cambridgeshire Smoking Cessation Services Evaluation.

Participants of the Cambridgeshire Smoking Cessation Services will be asked to fill out a survey, which gathers background information, employment history, former and current smoking habits and background health history. Subjects will also be contacted by telephone after one month and one year, and asked about their progress towards smoking cessation. If participants have been able to abstain from
smoking, they will be asked if they would be willing to have a CO test done on a scheduled day at one of two smoking cessation clinics. After completing the survey, participants names and phone numbers will be added to a master list which will be used for telephone and CO level follow-up. This list will be kept by the level 2 or 3 advisor in a secure location. The survey will be placed in an envelope and forwarded to the Cambridge Drug and Alcohol Service on Mill Road, where they will be held in a locked office. Participants will be assigned a number and information from the surveys will be entered into the computer according to the patient number. Follow-up data will also be forwarded to the Cambridge Drug and Alcohol Service and coded in a similar fashion.

500 (proj 11/10/2000)
N0544093556
Cambridge Consortium - Addenbrookes
Eastern Regional Office
4/12/2000
4/12/2003
Box No Community Bag, Mill House, Brookfields Hospital, CB1 3DF
01223-210194

Is an integrated service, combining a hospital-based smoking cessation program with follow-up community support, better than community self-referral?
Prospective, randomised interventional, case-controlled study
450 adult smokers randomised to 3 groups (see methodology)
Number of (biochemically validated) sustained quitters at 12 months
N0654168355
Carmarthenshire NHS Trust
Wales
1/4/2005
1/4/2006
Prince Philip Hospital, Llanelli, SA15 8QW, UK
01554 783133

7. Lewis, D.S., Cluster randomised, controlled trial of pro-actively identifying smokers and offering evidence-based support to stop smoking. Ongoing.
We hypothesise that systematically identifying smokers who want to quit smoking using general practice registers and questionnaires, and pro-actively referring them to use a range of evidence-based smoking cessation interventions, will be effective and cost-effective in encouraging widespread smoking cessation. The primary objective of the study is to compare the effectiveness of this cessation intervention in terms of point abstinence (for >= 7 days) from smoking at 6 months between smokers in intervention and control (usual care) practices.
We have designed this intervention following a series of focus groups with smokers who want to quit from deprived areas of Nottingham aimed at determining the barriers which prevent smokers from economically disadvantaged groups from accessing smoking cessation services, and how these might be overcome. Smokers' awareness of the available smoking cessation services was very low, and smokers believed they would be more likely to attend services after a personal invitation accompanied by information about the interventions and support that services could provide.
1000 smokers per practice so 1000 x 16 = 16,000 smokers. 8,000 of these will be in control practices.
The primary outcome will be self-reported smoking cessation for at least 7 days before follow-up at 6 months, validated by salivary cotinine measurement.
8. Oborne, D.A., Smoking cessation pharmacy services: development of continuous care between secondary and primary care. Ongoing. Does addition smoking cessation support in the community increase smoking cessation rates above that achieved by hospital advice and 4 week follow-up (i.e. usual care)?

Patients referred to the GSTT smoking cessation pharmacist for smoking cessation advice and 4 weeks follow-up will be randomised to additional follow-up or no additional follow-up. Patients accepting additional follow-up will be given contact details of community healthcare professionals near their home and a referral letter including their smoking history, quit date and nicotine replacement therapy used. Patients will self-refer to the community healthcare professional of their choice and will be followed for an additional 4 weeks in the community. Smoking cessation rates between the two groups will be compared at eight weeks. Approx. 300 patients referred to the smoking cessation pharmacist. Smoking cessation rates at eight weeks after quit date (the date agreed for stopping smoking).


To investigate the reasons why current smoking cessation services are not taken up by potential users in order to inform the equity audit and to make a proposal to improve access.

A qualitative study using a focus group method to explore the views, experiences and consensus opinions of smokers and ex-smokers from 'hard to reach' target groups who have chosen not to use smoking cessation services or who have dropped out from these services.

Smokers and ex-smokers (pregnant women, parents, and carers of children under 5 years old; young people aged 11-15; Male manual workers, unemployed people and minority ethnic groups)

Better understanding of why some groups do not use smoking cessation services.
The study aims to promote user participation and involvement, provide recommendations for service improvements and configuration, provide insight into what hinders or promotes cessation in black adults and link to the LSL equity audit. Focus groups of up to 10 people will provide an appropriate platform to elicit the accounts and experiences of black service users in Lambeth. Black adults who accessed the the stop smoking service between 2004-5 will be sent invitation letters and Participant information Sheets by the Stop Smoking service and will contact the researcher by phone if they would like to take part. The Stop smoking service will follow the letter with a phone call after 10 days. The first 30 responses will be included in the study.
30 Black smokers who have accessed the Lambeth Stop Smoking Service between 2004 and 2005.
To investigate the lived experiences of black smokers and non smokers.
N0534169494
Lambeth, Southwark and Lewisham Primary Care Trusts
London Regional Office
1/9/2005
31/7/2006
Lambeth PCT, Public Health Manager - Tobacco Control, 1 Lower Marsh, London, SE1 7NT
Lambeth PCT

What is the likely upper limit of the contribution of a formal programme to aid smoking cessation?
Case note review. Questionnaire/surveys. Controlled trial without randomisation.
Young mothers who either smoked during pregnancy or gave up and relapsed after it. Also partners of women who smoked during pregnancy
From the descriptive study in the project we aim to obtain a smoking prevalence figure, self initiated cessation prevalence and rates of uptake and self reported cessation. The study will investigate the motivation and attitudes on smoking and smoking cessation intervention of pregnant women.
N0547111164
East Norfolk and Waveney Research Consortium (Norfolk & Norwich UH/ Norwich PCT/James Paget/NWMHP)
Eastern Regional Office
1/5/2002
1/11/2002
171 College Road, Norwich, NR2 3JD
01603 307286 work
9. APPENDIX C – Search Strategy

A) NHS Smoking Review: First Searches for Reviews

The following databases were searched for systematic reviews:

- Cochrane Database of Systematic Reviews
- Database of Abstracts of Reviews of Effects
- Health Technology Assessment Database
- National Research Register (including CRD ongoing reviews database)
- SIGN Guidelines
- National Guideline Clearinghouse
- HSTAT
- TRIP

807 references were retrieved and sent to Kirsten Bell on 08 May 2006.

Cochrane Database of Systematic Reviews: Internet
(http://www3.interscience.wiley.com/cgi-bin/mrwhome/106568753/HOME?CRETRY=1&SRETRY=0)

Searched 05.05.2006, identified 73 reviews [saved as file cdrs-nhssmoking.txt].

Note: Cochrane reviews are likely to be international and not focused on solely UK initiatives. Therefore the strategy was run without the England terms and the NHS terms.

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<th>Hits</th>
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</tr>
<tr>
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<td>3183</td>
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<td>#3</td>
<td>MeSH descriptor Tobacco Use Cessation, this term only in MeSH products</td>
<td>21</td>
</tr>
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<td>1312</td>
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<tr>
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<td>3163</td>
</tr>
<tr>
<td>#6</td>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
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<tr>
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<td>title or policy or policies or program* or service* or initiative* or intervention* or campaign* in Abstract in all products</td>
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<tr>
<td>#16</td>
<td>hotline* or help-line* or (help next line*) or hotline* or hot-line* or (hot next line*) or quit-line* or quit-line* or (quit next line*) in Record Title or hotline* or help-line* or (help next line*) or hotline* or hot-line* or (hot next line*) or quit-line* or (quit next line*) in Abstract in all products</td>
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<td>bupropion or zyban or NTR or (nicotine next replacement) or (nicotine next patch*) or nicorette or (nicotine near/2 gum) in Record Title or bupropion or zyban or NTR or (nicotine next replacement) or (nicotine next patch*) or nicorette or (nicotine near/2 gum) in Abstract in all products</td>
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DARE: Internal CRD Database

Searched 05.05.2006, identified 284 records [saved as file dare-nhssmoking.txt].

Note: It was not possible to limit the search to find UK initiatives; the strategy was run without the England terms and the NHS terms.

S smoking or smoker or smokers or tobacco or nicotine or cigar$ or bidi$ or kretek or paan or gutkha or snuff or snus or betel or hand(w)roll$ or betel(w)nut$ (290)
S policy or policies or programme or programmes or programme or programmes or service or services or initiative$ or intervention$ or campaign$ (4757)
S helpline$ or help(w)line$ or hotline$ or hot(w)line$ quitline$ or quit(w)line$ (4)
S support or advice or information or patient(w)leaflet$ or patient(w)flyer$ or training or guidance or counseling or counselling or patient(w)education (9126)
S bupropion or zyban or NRT or nicotine(w)replacement or nicotine(w)patch$ or Nicorette or nicotine(2w)gum (60)
S s2 or s3 or s4 or s5 (9355)
S s1 and s6 (284)

Health Technology Assessment Database: Internal CRD Database

Searched 05.05.06, identified 75 records [saved as file hta-nhssmoking.txt].

Note: It was not possible to limit the search to find UK initiatives; the strategy was run without the England terms and the NHS terms.

S smoking or smoker or smokers or tobacco or nicotine or cigar$ or bidi$ or kretek or paan or gutkha or snuff or snus or betel or hand(w)roll$ or betel(w)nut$ (75)
S policy or policies or programme or programmes or programme or programmes or service or services or initiative$ or intervention$ or campaign$ (2184)
S helpline$ or help(w)line$ or hotline$ or hot(w)line$ quitline$ or quit(w)line$ (1)
S support or advice or information or patient(w)leaflet$ or patient(w)flyer$ or training or guidance or counseling or counselling or patient(w)education (5726)
S bupropion or zyban or NRT or nicotine(w)replacement or nicotine(w)patch$ or Nicorette or nicotine(2w)gum (8)
S s2 or s3 or s4 or s5 (5745)
S s1 and s6 (75)

National Research Register: Internet (http://www.update-software.com/national)
Searched 05.05.06, identified 398 projects [saved as files: NRR_CRDOngoingProjects(1).txt; NRR_MRCProjects(5).txt; NRR_MultiCentreComplete(6).txt; NRR_MultiCentreOngoing(3).txt; NRR_ParticipCentreComplete(42).txt; NRR_ParticipCentreOngoing(23).txt; NRR_RegAndNatComplete(96).txt; NRR_RegAndNatOngoing(7).txt; NRR_SingleCentreComplete(159).txt; NRR_SingleCentreOngoing(30).txt].

Note: Implicit in searching the NRR is that the projects are UK based. Again, the search was left broad to identify projects on smoking cessation programmes as it was not possible to limit the search to England or NHS initiatives.

Search strategy: NHS smoking review FINAL

#1. smoking:ti or smoking:mr 742
#2. SMOKING single term (MeSH) 375
#3. TOBACCO USE CESSATION single term (MeSH) 1
#4. SMOKING CESSATION single term (MeSH) 199
#5. (smoker:ti or smoker:mr or smokers:ti or smokers:mr) 304
#6. tobacco:ti or tobacco:mr 123
#7. TOBACCO explode tree 1 (MeSH) 6
#8. TOBACCO USE DISORDER single term (MeSH) 20
#9. nicotine:ti or nicotine:mr 117
#10. NICOTINE single term (MeSH) 59
#11. cigar*:ti or cigar*:mr 86
#12. (bid*:ti or kretek:ti or paan:ti or gutkha:ti or snuff:ti or snus:ti or betel:ti or (hand next roll*:ti) or (betel next nut*:ti) or bid*:mr or kretek:mr or paan:mr or gutkha:mr or snuff:mr or snus:mr or betel:mr or (hand next roll*:mr) or (betel next nut*:mr)) 12
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#14. (policy:ti or policies:ti or program*:ti or service*:ti or initiative*:ti or intervention*:ti or campaign*:ti or policy:mr or policies:mr or program*:mr or service*:mr or initiative*:mr or intervention*:mr or campaign*:mr) 17993
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#16. HOTLINES single term (MeSH) 55
#17. (support:ti or advice:ti or information:ti or (patient next leaflet*:ti) or (patient next flyer*:ti) or training:ti or guidance:ti or counselling:ti or counselling:mr or support:mr or advice:mr or information:mr or (patient next leaflet*:mr) or (patient next flyer*:mr) or training:mr or guidance:mr or counselling:mr or (patient next education:mr)) 10904
#18. COUNSELING single term (MeSH) 348
#19. PATIENT EDUCATION single term (MeSH) 1013
#20. (bupropion:ti or zyban:ti or ntr:ti or (nicotine next replacement:ti) or (nicotine next patch*:ti) or nicorette:ti or (nicotine next gum:ti) or (nicotine next chewing:ti) or bupropion:mr or zyban:mr or ntr:mr or (nicotine next replacement:mr) or (nicotine next patch*:mr) or nicorette:mr or (nicotine next gum:mr) or (nicotine next chewing:mr)) 62
#21. BUPROPION single term (MeSH) 8
#22. (#14 or #15 or #16 or #17 or #18 or #19 or #20 or #21) 25463
#23. (#13 and #22) 398
SIGN Guidelines: Internet (http://www.sign.ac.uk/guidelines/published/numlist.html)

The Scottish Intercollegiate Guidelines Network website's list of guidelines was scanned for relevant items on 05 May 2006. No relevant guidelines were identified.

National Guideline Clearinghouse: Internet (http://www.guidelines.gov)

The National Guidelines Clearinghouse was searched on 05 May 2006. The results were scanned for relevance and 16 potentially relevant guidelines were identified.

The search interface allows only simple searching. The following terms were entered line-by-line:
- smoking or tobacco or smoker* or nicotine or cigar*
- bidi* or kretek or paan or gutkha or snuff or snus or betel or "hand roll*" or "hand-roll*" or "betel nut*"


HSTAT was searched on 05 May 2006 for potentially relevant information. 7 items were identified.

TRIP: Internet (http://www.tripdatabase.com)

TRIP was searched via the web on 08 May 2006. The results were scanned for relevance and 22 potentially relevant items were identified.

At the time of searching the facility to combine search sets was not working. Therefore only simple searching could be undertaken. The following terms were entered line-by-line:
- "smoking cessation"
- "smoking polic*"
- "smoking program*"
- "smoking service*"
- "smoking initiative*"
- "smoking intervention*"
- "smoking campaign*"

B) Search for relevant studies in MEDLINE (1990 onwards)

Search on MEDLINE (MEZZ 1950 to date) 24-05-2006

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C) Websites searched

National Institute of Health & Clinical Excellence
http://www.nice.org.uk

UK National Smoking Cessation Conference
http://www.uknscc.org/index.html

Department of Health
http://www.dh.gov.uk/

QUIT
http://www.quit.org.uk

Action on Smoking and Health
http://www.ash.org.uk

National Health Service
http://www.nhs.uk

National Statistics
http://www.statistics.gov.uk/

UK Smoking Cessation Conference
http://www.uknscc.org/index.html

Association of Public Health Observatories
http://www.apho.org.uk

SmokeFree London
http://www.smokefreelondon.org

Where facilities were available the following keywords were searched:

- “smoking BMEG”
- “smoking ethnic minorities”
- “smoking pregnancy”
- “smoking pregnant women”
- “smoking ‘hard to reach’ groups”
- “smoking manual groups”
- “smoking SES”
- “smoking disadvantage”
"smoking health inequalities"
- "smoking vulnerable populations"
- "smoking ‘priority groups’"

On websites where a search tool was not available, publications lists were scanned for relevant reports.
Reference List


Marr, B. Helping pregnant women and their families stop smoking. 2005. UK National Smoking Cessation Conference.


Ref Type: Slide


Bickerstaffe, G. Smoking cessation strategies for hospital inpatients. 2006. UK National Smoking Cessation Conference.


Cornish, M. (2006). Local enhanced service for smoking cessation St Albans & Harpenden PCT.

Croucher, R. Barriers to accessing stop smoking services in Bangladeshi men. 2003. London, Queen Mary University of London.


Jones, A., Mooney, S., Gate, L. et al. (2005). *Kingston and Richmond Stop Smoking Service Audit 2004* Kingston: Richmond and Twickenham PCT; Kinston PCT.

Jones, E., Molyneux, A., Antoniak, M., Britton, J., & Lewis, S. (2002). 'If someone could wave a magic wand I'd never smoke again...' - barriers and motivators to accessing smoking cessation services amongst smokers in deprived areas of


Marr, B. Helping pregnant women and their families stop smoking. 2005. UK National Smoking Cessation Conference.


North Derbyshire Stop Smoking Service (2005). *52 Week follow up of Specialist Service 4 week quitters from Quarter 2, 2003/04 Chesterfield PCT.*


Ref Type: Generic


Ref Type: Generic


*Nursing Times, 102.*

South Gloucestershire PCT (2005). *Smoking cessation service: Health equity audit.* Gloustershire: South Gloucestershire PCT.


Watt, A., Morris, J., Bennett, S. et al. (2005). *Making a difference: the stop smoking services in Cornwall & the Isles of Scilly - Assessment of the service and effect on behaviour and smoking habits* Cornwall: Cornwall Health Research Unit.


