



ASH Scotland Recent research on smoking cessation July 2010

This short briefing provides a selective overview of research in the field of smoking cessation published between January 2009 and July 2010.

1. Methods of cessation

NHS smoking cessation service statistics (Scotland)

NHS smoking cessation service statistics¹ for the 2009 calendar year show that 69,882 quit attempts were made with the help of NHS smoking cessation services in Scotland. This compares with 51,621 quit attempts in 2008 (revised 2008 figures), and 44,019 quit attempts in 2007 (revised 2007 figures)². 56% of all quit attempts in 2009 were made with pharmacy cessation services. The one month self-reported quit rate for pharmacy cessation services was 30%, compared with 48% for non-pharmacy cessation services. 79% of quit attempts in Scotland in 2009 involved the use of nicotine replacement therapy (NRT). Quit attempts using NRT had a one month self-reported quit rate of 35%. 12% of quit attempts were made using varenicline, a reduction on the previous year. Quit attempts using varenicline had a 60% quit rate in 2009.

NHS smoking cessation services

The effectiveness of the NHS smoking cessation services in England was analysed in a systematic review³ of 20 studies published between 1990 and 2007. The results from this review suggest that NHS Stop Smoking Services are effective in helping smokers to quit in both the short and longer term. Group interventions appeared to be more effective than one-to-one interventions. Younger smokers, female smokers, pregnant smokers and more deprived smokers appeared to have lower short-term quit rates. Further research is needed into the efficacy of different forms of intervention offered by the NHS Stop Smoking Services and also into the efficacy of these interventions within different subpopulations.

Unassisted cessation

Chapman and MacKenzie⁴ indicate that research shows two-thirds to three-quarters of ex-smokers quit smoking unaided but find that most of the published research papers of smoking cessation interventions are studies and reviews of assisted cessation with few describing the impact of policies or campaigns on cessation which is unassisted at the individual level. Many of the studies on assisted cessation were found to be funded by pharmaceutical companies manufacturing smoking cessation aids. It is suggested that health authorities should embrace the message that the most common and successful method of cessation used by ex-smokers is unassisted cessation and that pharmacological and professional support are not essential for quitting smoking.

Relapse prevention interventions for smoking cessation

A Cochrane systematic review of relapse prevention interventions⁵ assesses whether specific interventions reduce the proportion of recent quitters who return to smoking. Hajek, et al. conclude that the available evidence does not support the use of a specific behavioural component or intervention for helping smokers who have successfully quit for a short time to avoid relapsing to smoking again. It is suggested that resources should be focussed on supporting initial attempts to stop smoking rather than on extended relapse prevention interventions. In terms of pharmacotherapy, the authors identify that extended treatment with varenicline may prevent relapse but extended treatment with bupropion is unlikely to have a clinically important effect and that further studies of extended treatment with NRT are needed.

Motivational interviewing

Motivational interviewing is a counselling technique designed to help people explore and resolve their ambivalence about changing their behaviour. A recent Cochrane review⁶ identified 14 randomized controlled trials in which motivational interviewing was offered to smokers to assist them to stop smoking. Motivational interviewing was found to be effective when delivered by general practitioners and trained counsellors. Longer sessions of more than 20 minutes were found to be more successful than shorter sessions and multiple sessions were marginally more successful than a single session. However the results of this study should be interpreted with caution due to variations in treatment delivery, study quality and possibility of selective reporting bias.

Mobile phone-based interventions for smoking cessation

A 2009 Cochrane review⁷ to determine whether mobile phone-based smoking cessation interventions are effective in helping people stop smoking concludes that current evidence shows no effect on long-term outcome. Short-term results were positive but more evidence is needed to determine whether mobile phone-based interventions can help people stop smoking.

Allen Carr

There has not been any new research published recently on Allen Carr's method of smoking cessation. Two existing observational studies^{8 9} have identified Allen Carr's workplace seminars to be an effective means of facilitating smoking cessation in the workplace. However the studies receive National Institute for Health and Clinical Excellence's (NICE) lowest ranking of study quality and current NICE guidance concludes 'there is not enough evidence from well-conducted studies to recommend these [Allen Carr's Easyway] aids'. NICE calls for further research on the method and suggests that research commissioners should undertake high quality comparison studies to determine the short and long-term efficacy of Allen Carr's system¹⁰.

Alternative therapies for smoking cessation

The most recent Cochrane review¹¹ on hypnotherapy for smoking cessation found no evidence to show that it is more effective than other interventions or no intervention. A separate Cochrane review¹² found no consistent evidence

that acupuncture, acupressure, laser therapy or electrostimulation are effective for smoking cessation. However, the review concludes that in the short term acupuncture may be better than doing nothing and there is not enough evidence to dismiss the possibility that acupuncture might have a greater effect than placebo.

2. Smoking cessation and target groups

Access to smoking cessation services for disadvantaged groups

A systematic review¹³ was carried out of 48 studies identifying and supporting smokers from disadvantaged groups for smoking cessation, and providing and improving their access to smoking cessation services. The review finds some limited evidence of effective strategies to increase access to cessation services for disadvantaged smokers. Several methods of recruiting smokers were identified which include proactively targeting patients through primary care records and the use of social marketing techniques. The review identifies barriers to accessing services and it appeared that providing cessation services in different settings improved access amongst disadvantaged smokers. Some potentially promising interventions which merit further research were also recognised. However it was noted that while many of the studies included in this review collected socioeconomic data, very few analysed its contribution to the results. The authors therefore suggest that future research should pay greater attention to disaggregated data collection, reporting and analysis.

NICE guidance on how to stop smoking in pregnancy and following childbirth

NICE issued new formal guidance on how to stop smoking in pregnancy and following childbirth in June 2010¹⁴. Eight recommendations are made which mainly cover interventions to help pregnant smokers stop smoking. There are recommendations on how to identify and refer pregnant women who smoke to NHS Stop Smoking Services, which includes getting midwives to encourage all pregnant women to have their carbon monoxide levels tested; advice on how NHS Stop Smoking Services should contact and support referrals; and on the use of NRT. Further recommendations are made on how NHS Stop Smoking Services can help partners and other household members who smoke and on training for professionals delivering interventions. The evidence review for this guidance found mixed evidence on the efficacy of NRT for smoking cessation in pregnancy, with a meta-analysis of data from five trials finding it be effective, but a recently published large double-blind, placebo-controlled trial found no evidence of efficacy.

Smoking cessation services for pregnant women in Scotland

Research¹⁵ carried out in Scotland found that only 3.2% of pregnant smokers identified at maternity booking stopped smoking during pregnancy in 2006. The authors argue that the small proportion of women quitting during pregnancy is a product of current limitations at each step of service provision - identification, referral, engagement and treatment. It was found that many smokers were not asked or gave false information about smoking at maternity

booking appointments and it is suggested that carbon monoxide testing could bypass this difficulty.

Interventions for smoking cessation during pregnancy

A Cochrane review¹⁶ of interventions to help pregnant women stop smoking found 72 controlled trials conducted between 1975 and 2008 involving 25,000 women. The interventions were found to be effective in helping women stop smoking during pregnancy by approximately 6% overall. The most effective intervention appeared to be providing incentives, which helped around 24% of women stop smoking. Smoking cessation interventions reduced the number of babies with low birthweight and preterm births, confirming that stopping smoking can reduce the adverse effects of smoking on newborn babies.

3. Harm reduction methods

E-cigarettes

The short-term effects of the e-cigarette on desire to smoke and withdrawal symptoms were studied in a randomised cross-over trial in New Zealand¹⁷. 40 adults who smoked 10 or more cigarettes a day and were not currently contemplating cessation received either e-cigarettes containing 16mg nicotine capsules or e-cigarettes containing 0mg nicotine capsules, a conventional nicotine inhalator or their usual cigarettes. The 16mg nicotine e-cigarette was found to be equally effective as the inhalator in reducing the desire to smoke, and was rated more pleasant to use than the inhalator. The authors note that their findings should be considered preliminary and that more extensive research is needed to assess the efficacy of the e-cigarette as an aid to stopping smoking and to evaluate longer-term safety. A further study¹⁸ found that e-cigarettes did not increase plasma nicotine levels significantly, although it is likely that (as is the case with other NRT products) that increases in plasma nicotine levels will take longer to reach detectable levels than is the case with conventional cigarettes¹⁹.

Reducing smoking versus abrupt cessation

A review²⁰ of ten studies compares the success of reducing smoking prior to quit date with abrupt smoking cessation. Pooled results find comparable quit rates for both cessation methods. This was also true whether or not nicotine replacement therapy was used and whether or not behavioural support or self-help materials were used. The authors recommend further research to investigate which method of reduction before quitting is most effective and which categories of smokers benefit the most from each intervention.

¹ ISD Scotland. *NHS smoking cessation service statistics (Scotland) 1st January to 31st December 2009* [online] ScotPHO, 2010. Available from: <http://www.scotpho.org.uk/smokingcessationstats2009/> [accessed 26 July 2010]

² ISD Scotland. *NHS smoking cessation service statistics (Scotland) 1st January to 31st December 2009*. [online] ScotPHO, 2010. Available from: <http://www.scotpho.org.uk/smokingcessationstats2008/> [accessed 26 July 2010]

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⁴ Chapman, S. and MacKenzie, R. The global research neglect of unassisted smoking cessation: causes and consequences. *PLoS Medicine* [online] 7(2): e1000216, 2010. Available from:

- <http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000216> [accessed 5 July 2010]
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