NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

PUBLIC HEALTH INTERVENTION DRAFT GUIDANCE

Issue date: May 2007

Workplace health promotion: how to help employees to stop smoking

Public Health Intervention Guidance no. 5

Foreword

The Department of Health asked the National Institute for Health and Clinical Excellence (NICE or the Institute) to produce public health guidance on workplace health promotion with reference to smoking and what works in motivating and changing employees' behaviour. The guidance is aimed at all those who are directly or indirectly involved in the implementation of smokefree workplaces and the provision of smoking cessation support in the workplace.

The Public Health Interventions Advisory Committee (PHIAC) has considered both the review of the evidence, the economic appraisal and surveys of current practice.

This document sets out the preliminary recommendations developed by the Committee. It does not include all the sections that will form part of the final guidance. The Institute is now inviting comments from stakeholders (listed on the NICE website at: www.nice.org.uk).

Note that this document does not constitute the Institute's formal guidance on workplace interventions to promote smoking cessation. The recommendations made in sections 1 and 5 are provisional and may change after consultation.

The process the Institute will follow after the consultation period is summarised below. For further details, see 'The public health guidance

development process: An overview for stakeholders including public health practitioners, policy makers and the public' (this document is available on the Institute's website at: www.nice.org.uk/page.aspx?o=299973).

- The Committee will meet again to consider the consultation comments and the stakeholder evidence.
- After that meeting, the Committee will produce a second draft of the guidance.
- The draft guidance goes to the NICE Guidance Executive for final sign off.

The key dates are:

Closing date for comments: 19 January 2007.

Third Committee meeting: 9 February 2007.

Details of membership of the Public Health Interventions Advisory Committee are given in appendix C and key supporting documents used in the preparation of this document are listed in appendix E.

Contents

1 Recommendations 4
2 Public health need and practice 6
3 Considerations 7
4 Implementation 9
5 Recommendations for research 9
6 Review 9
7 Related guidance 10
8 Acknowledgements 10
9 References 11
Appendix A: recommendations for policy and practice and supporting evidence statements 13
Appendix B: gaps in the evidence 21
Appendix C: membership of the Public Health Interventions Advisory Committee 22
Appendix D: summary of the methods used to develop this guidance 25
Appendix E: supporting documents 32

1 Recommendations

The Public Health Interventions Advisory Committee (PHIAC) considered the evidence of effectiveness and cost effectiveness in drafting the recommendations. Note: this document does not constitute the Institute's formal guidance on this intervention. The recommendations are preliminary and may change after consultation.

See the evidence reviews, supporting evidence statements and economic appraisal on the Institute's website at www.nice.org.uk

The recommendations in this section are presented without any reference to evidence statements. Appendix A repeats the recommendations and lists their linked evidence statements.

General issues

After 1 July, most employers in England will be compelled to provide a smokefree workplace. They are not compelled to help employees to stop smoking, however, this can help reduce sickness absence and so increase productivity, as well as leading to longer term health benefits for the employees.

Stop smoking services should be delivered by individuals who have received appropriate training that complies with the Health Development Agency standard on smoking cessation (www.nice.org.uk/page.aspx?o=502591).

Recommendations

Recommendation 1

Employers should encourage and support their staff to give up smoking by providing access to evidence-based interventions. These currently include brief advice, one to one and group therapy, drug treatments, telephone helplines and self-help materials. Employers should take account of individual needs – including irregular working hours – and preferences. Where there is sufficient demand, on-site smoking cessation support could be offered.

Recommendation 2

Employers should provide incentives to encourage employees who smoke to quit. These could include time off in lieu to attend smoking cessation services or reimbursement for the cost, if any, of treatment.

Recommendation 3

Employers should provide smokers who are unwilling or unable to quit with information and support. This could include the provision of nicotine replacement therapy (NRT) to help offset temporary nicotine cravings.

Recommendation 4

Employers should take responsibility for providing information to employees who want to stop smoking, or they should identify a member of staff who will take on this responsibility. The employer (or designated staff member) should contact either the local stop smoking services or their occupational health service to get information on the benefits of stopping smoking – and how to stop. They should make this information widely available at work.

Recommendation 5

Smoking cessation services should offer workplaces a range of evidence-based interventions including brief advice, one to one and group therapy, drug treatments, telephone helplines and self-help materials. Services should be tailored to the individual's needs and preferences, although the most effective options should be offered first.

Recommendation 6

NHS Stop Smoking Services should ensure workplace support is a core component of the business. Where appropriate, outreach support should be offered.

Recommendation 7

NHS commissioners and NHS Stop Smoking Services should ensure they have the necessary resources in place to respond to fluctuations in demand, particularly in the lead up to – and following – implementation of smokefree legislation.

2 Public health need and practice

Cigarette smoking is still the main cause of preventable illness and premature death in England. It led to an estimated annual average of 86,500 deaths between 1998 and 2002 (Twigg et al. 2004). A wide range of diseases and conditions are caused by cigarette smoking including: cancers, respiratory disease, coronary heart and other circulatory diseases, stomach/duodenal ulcer, impotence and infertility, complications in pregnancy and low birthweight. It is also a major factor contributing to health inequalities.

Following surgery, it contributes to lower survival rates, post-operative respiratory complications and poor healing.

Breathing secondhand smoke (‘passive smoking’) can affect the health of non smokers. It can exacerbate respiratory problems and trigger asthma attacks. Longer term, it increases the risk of lung cancer, respiratory illnesses (especially asthma), heart disease and stroke (International Agency for Research on Cancer 2002; Scientific Committee on Tobacco and Health 2004; US Environmental Protection Agency 1993).

The scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke (US Surgeon General 2006). Exposure in the workplace is likely to be responsible for the deaths of more than two employed people per working day (about 617 deaths per year) in the UK (Jamrozik 2005).

Reducing levels of smoking among workers will help reduce cardio-respiratory diseases – one of the largest causes of sickness absence. (Sickness absence results in reduced productivity and increased costs for employers.)

Policy background

The Government’s independent Scientific Committee on Tobacco and Health (SCOTH) first summarised the health evidence on secondhand smoke and recommended smokefree workplaces in 1998 (SCOTH 1998). The tobacco white paper, ‘Smoking kills’ (DH 1998) reinforced the message that people should not have to be exposed to cigarette smoke. But in 2004, about half of

British workplaces still allowed some degree of smoking on the premises (Lader 2005).

Shifting the balance towards smokefree workplaces and public places has become a key aspect of the government's health strategy, as highlighted in the public health white paper, 'Choosing health' (DH 2004). Virtually all workplaces in England will become smokefree when the 2006 Health Act (House of Commons) comes into force on 1 July 2007.

As a setting for smoking cessation interventions, the workplace has several advantages:

- large numbers of people can be reached (including groups who may not normally consult health professionals – such as young men)
- there is the potential to provide peer group support
- a non smoking working environment encourages people who smoke to quit.

3 Considerations

3.1 For the purposes of this guidance, 'smoking cessation services' refers to providers of treatments that have been proven to work using randomised controlled trials. They may be offered by a range of providers including NHS Stop Smoking Services.

3.2 The Committee notes that the most effective workplace smoking cessation interventions are those proven to work in other settings. However, there is a lack of evidence of how – and when – these should be delivered in an environment where smoking has been banned in workplaces and public places (as will be the case in England from July 2007).

3.3 Based on the experience of other countries that have introduced similar legislation, the Committee advises the DH to give NHS Stop Smoking Services advance notice of any publicity or public relations activities undertaken to introduce the policy changes. In both the Republic of Ireland and Scotland, demand for help to stop smoking increased

dramatically in response to media activity on smokefree legislation. However, it declined following implementation of the legislation. This suggests there may be an initial surge in demand from English smokers which commissioners and providers of NHS Stop Smoking Services need to respond to. If on-site provision is not feasible in the run up to July recruiting advisors who can work both in the workplace and the community is another possibility.

3.4 The Committee also advises the DH to make a database of NHS Stop Smoking Services publicly available, to ensure employers can provide their employees with the help they need to quit. This should be regularly updated.

3.5 The Committee is recommending that only evidence-based treatments are used. Interventions that have been shown to be effective using randomised control trials are presented in Appendix A.

3.6 The Committee wishes to emphasise that while the recommendations are quite specific, all smoking cessation services should:

- ensure equality of access
- ensure equity of provision by identifying small and medium sized employers who may need assistance (large employers may have smoking cessation support in place)
- identify the needs of clients
- address the needs of clients
- provide support appropriate to the client's circumstances, offering locations and schedules to suit them
- identify the client's smoking status on completion of treatment and, where resources allow, use biochemical validation
- congratulate clients who have quit, offer further support to those who have relapsed
- learn from successes and the barriers to success to improve the support offered.

3.7 When implementing smokefree policies, employers should decide whether or not staff are entitled to take smoking breaks during working hours (and, if so, how often and for how long).

Following consultation, more considerations may be added to this section.

4 Implementation

The Healthcare Commission assesses the performance of NHS organisations in meeting core and developmental standards set by the DH in 'Standards for better health' issued in July 2004. The implementation of NICE public health guidance will help organisations meet the standards in the public health (seventh) domain, such as core standards C22 and C23 and developmental standard D13. In addition, it will help meet the health inequalities target as set out in 'The NHS in England: the operating framework for 2006/7' (DH 2006).

NICE is developing tools to help organisations implement this guidance (listed below). These will be available on our website (www.nice.org.uk/PHI005) shortly after publication of the guidance in May 2007. These are likely to include:

- slides highlighting key messages for local discussion
- costing tools
- implementation advice on how to put the guidance into practice and national initiatives which support this locally
- audit criteria to monitor local practice.

5 Recommendations for research

The Public Health Interventions Advisory Committee recommended that the following research questions should be addressed.

This section will be completed in the final guidance document.

6 Review

This section will be completed in the final guidance document.

7 Related guidance

Published

Guidance on the use of nicotine replacement therapy (NRT) and bupropion for smoking cessation. *NICE technology appraisal* no.39 (2002). Available from: www.nice.org.uk/TA039

Brief interventions and referral for smoking cessation in primary care and other settings. *NICE public health intervention guidance no.1* (2006). Available from: www.nice.org.uk/PHI001

Under development

Technology appraisals

Varenicline for smoking cessation (July 2007)

Public health programme guidance

Smoking cessation services, including the use of pharmacotherapies, in primary care, pharmacies, local authorities and workplaces, with particular reference to manual working groups, pregnant smokers and hard to reach communities (November 2007).

8 Acknowledgements

This guidance was developed by PHIAC supported by the NICE Project Team. For details of PHIAC membership see appendix C.

The NICE Project Team comprised:

Professor Mike Kelly

CPHE Director

Tricia Younger

Associate Director

Dr Lesley Owen

Lead Analyst

Patti White

Analyst

Hugo Crombie
Analyst

Dr Alastair Fischer
Health Economics Adviser.

NICE is grateful for the contribution of the British Columbia Centre of Excellence for Women's Health, which carried out the review of effectiveness; Professor Ann McNeill and Adam Crosier, who carried out research and provided expert testimony; and the York Health Economics Consortium which carried out the economic appraisal. Expert testimony was also provided by Deborah Arnott, Ian Gray, Andrew Hayes and Paul Hooper. The authors of the review of effectiveness were: Kirsten Bell, Lucy McCulloch, Karen DeVries, Lorraine Greaves and Natasha Jategaonkar. The economic appraisal was undertaken by Paul Trueman, Sarah Flack and Matthew Taylor.

NICE would also like to thank the stakeholders who commented on the scope and the evidence base, including those who submitted evidence.

9 References

Department of Health (1998) *Smoking kills*. London: The Stationery Office.

Department of Health (2004) *Choosing health: making healthy choices easier*. London: The Stationery Office.

Department of Health (2006) *Smoke-free premises and vehicles: Consultation on proposed regulations to be made under powers in the Health Bill.* London: The Stationery Office.

House of Commons (2006) *The Health act.* London: The Stationery Office.

International Agency for Research on Cancer (2002) Tobacco smoke and involuntary smoking. *IARC Monographs* Vol. 83. Lyon: WHO/IARC.

Jamrozik K (2005) Estimate of deaths attributable to passive smoking among UK adults: database analysis. *British Medical Journal* 330:812.

Lader D, Goddard E (2005) *Smoking-related behaviour and attitudes 2004*. London: Office of National Statistics.

Scientific Committee on Tobacco and Health (1998) *Report of the scientific committee on tobacco and health*. London: The Stationery Office.

Scientific Committee on Tobacco and Health (2004) *Secondhand smoke: review of the evidence since 1998*. London: The Stationery Office.

Twigg L, Moon G, Walker S (2004) *The smoking epidemic in England*. London: Health Development Agency.

United States Environmental Protection Agency (1993) *Respiratory health effects of passive smoking: lung cancer and other disorders*. Washington DC: Environmental Protection Agency.

United States Surgeon General (2006) *The health consequences of involuntary exposure to tobacco smoke: a report of the surgeon general*. Rockville MD: Department of Health and Human Services.

Appendix A: recommendations for policy and practice and supporting evidence statements

The Committee is recommending that only evidence-based treatments for smoking cessation are used. Interventions that have been shown to be effective in randomised control trials (and published in the Cochrane reviews) include: group therapy, individual counselling, advice from a range of health professionals, nicotine replacement therapy and bupropion, self-help materials, telephone counselling and quitlines.

This appendix sets out the recommendations and the associated evidence statements taken from a review of effectiveness and a review of the economic literature (see appendix D for the key to study types and quality assessments). It also includes details of 2 surveys into currrent practice. Recommendations are followed by the evidence statement(s) that underpins them. For example: [**evidence statement number 1**] indicates that the linked statement is numbered 1 in the review 'Summary of evidence of effectiveness of smoking cessation interventions in the workplace'.

The review is available on the NICE website (www.nice.org.uk/page.aspx?o=350204%20). Where a recommendation is not directly taken from the evidence statements, but is inferred from the evidence, this is indicated by **IDE** (inference derived from the evidence).

Recommendation 1

Employers should encourage and support their staff to give up smoking by providing access to evidence-based interventions. These currently include brief advice, one to one and group therapy, drug treatments, telephone helplines and self-help materials. Employers should take account of individual needs – including irregular working hours – and preferences. Where there is sufficient demand, on-site smoking cessation support could be offered. **(Evidence statements 1, 2, 9)**

Recommendation 2

Employers should provide incentives to encourage employees who smoke to quit. These could include time off in lieu to attend smoking cessation services or reimbursement for the cost, if any, of treatment.

(Evidence statement 10)

Recommendation 3

Employers should provide smokers who are unwilling or unable to quit with information and support. This could include the provision of nicotine replacement therapy (NRT) to help offset temporary nicotine cravings.

(Evidence statements 11 & 12)

Recommendation 4

Employers should take responsibility for providing information to employees who want to stop smoking, or they should identify a member of staff who will take on this responsibility. The employer (or designated staff member) should contact either the local stop smoking services or their occupational health service to get information on the benefits of stopping smoking – and how to stop. They should make this information widely available at work.

(Evidence statements 12 & 13, IDE, current practice research)

Recommendation 5

Smoking cessation services should offer workplaces a range of evidence-based interventions including brief advice, one to one and group therapy, drug treatments, telephone helplines and self-help materials. Services should be tailored to the individual's needs and preferences, although the most effective options should be offered first.

(Evidence statements 1, 2, 3, 4, 5, 9 & 11, current practice research)

Recommendation 6

NHS Stop Smoking Services should ensure workplace support is a core component of the business. Where appropriate, outreach support should be offered.

(IDE, current practice research)

Recommendation 7

NHS commissioners and NHS Stop Smoking Services should ensure they have the necessary resources in place to respond to fluctuations in demand, particularly in the lead up to – and following – implementation of smokefree legislation.

(Current practice research)

Evidence statements

Evidence statement 1

Although there are no available studies exploring which workplace interventions are most effective in the context of smokefree legislation, one 2+ study of a variety of workplace intervention types, offered in the context of a localised smoking ban found that more intensive interventions (for example, group treatment and one-hour clinics) produce higher success rates than less intensive interventions (for example, brief individual counselling and self-help manuals). It is unclear how readily these findings translate to workplaces in jurisdictions where comprehensive smokefree legislation has been introduced.

Evidence statement 2

A 1++ systematic review and a 1+ meta-analysis of the available international literature indicates that the most effective smoking cessation interventions in workplace settings are those interventions that have proven effectiveness more broadly. There is strong evidence that group therapy, individual counselling and pharmacological treatments all have an effect in facilitating smoking cessation. However, both reviews failed to identify effects due to particular intervention type. There is also evidence that minimal interventions, including brief advice from a health professional, are effective. Self-help manuals appear to be less effective, although there is limited evidence that interventions tailored to the individual have some effect.

Evidence statement 3

A 1+ study and a 2++ study indicate that men and women are equally successful in achieving abstinence in workplace smoking cessation programmes; however, important gender differences are apparent in smoking attitudes and behaviours. Women have less confidence in their ability to quit,

are less ready to quit than men and may require extra stimuli in order to quit smoking. In light of these factors, a 2+ study indicates that a multi-behavioural approach to behaviour change may be more effective for female smokers than a single component intervention, as it allows women to prioritise behaviour changes and may result in a greater sense of control and empowerment which increases women's confidence in tackling more challenging issues such as smoking cessation. Although these findings are based on American studies, they are likely to be broadly applicable to a UK setting.

Evidence statement 4

Although no studies were identified in the literature search that specifically address effective workplace interventions for younger and older smokers, evidence from a 2++ study indicates that older smokers are more likely to achieve successful abstinence in workplace interventions than younger smokers (although these employees were also more likely to be managers and light smokers). Furthermore, two 2+ studies examined the impact of age and job stress on cessation. Results from one study revealed that younger employees benefited more from higher demands than older employees with regards to smoking cessation. However, these findings were not supported in the other 2+ study. Therefore, although further research is needed in this area, it may be possible that younger employees who smoke require more intensive support for smoking cessation than older smokers, and that specifically tailoring interventions based on age may be beneficial. Although these findings are based on American studies, they are likely to be broadly applicable to a UK setting.

Evidence statement 5

A 2+ study found racial and ethnic differences in predictors of smoking cessation amongst participants in a workplace intervention. White males tended to be heavier smokers than minority ethnic males. The authors suggest that interventions focusing on alleviating withdrawal symptoms, enhancing motivation, and teaching coping skills to increase self-efficacy would also be relevant for this sub-population. The study also found that minority ethnic males did not achieve higher cessation rates, despite smoking

profiles that were more conducive to cessation; the authors conclude that incorporating a stress reduction component into interventions aimed at minority populations may be beneficial. A 1+ study found that inclusive intervention approaches, developing materials in the appropriate languages, and combining health promotion with occupational health and other health promotion activities helped to improve the success of an intervention tailored to working class, multi-ethnic populations. Although these studies are from the USA, which has a different ethnic composition to the UK, the findings of these studies seem broadly applicable to a UK setting.

Evidence statement 9

According to a 1++ systematic review, a key way that employers can encourage smokers to quit is by offering smoking cessation support. Such support is particularly important in the context of workplace smoking bans. A 2+ study concludes that because different types of smokers appear to choose different strategies for cessation, making a variety of smoking cessation strategies available to employees may meet the needs of more employees and increase participation in workplace programmes.

Evidence statement 10

Two 1++ systematic reviews of international studies indicate that financial incentives can support and encourage smokers to quit. While the addition of incentives does not appear to increase the quit rates of smoking cessation interventions in the workplace, there is evidence that such incentives do improve recruitment rates into worksite cessation programmes, which may lead to higher absolute numbers of successful quitters in the long-term.

Evidence statement 11

According to a 2+ study, the majority of employed smokers are not ready to quit smoking. Therefore, smoking cessation materials and programmes need to recognise that smokers are at different stages of change rather than tailoring their materials only to those smokers who are highly motivated to quit. The researchers argue that proactive interventions are required, including access to subsidised pharmacological cessation aids, monetary incentives for assessment of smoking risk, direct personalised feedback,

media/social marketing campaigns, and changes in the social norms and physical environment in the workplace, in public places, and in the home. Although this is an American study, its findings are likely to be broadly applicable to a UK setting.

Evidence statement 12

Two 2+ studies and a 2- study have explored the impact of an 'enriched' environment (including smoking bans, worksite health promotion activities and smoking cessation programmes) on those smokers who are not ready to quit. Although a 2+ study found that an enriched environment did not increase cessation amongst those smokers who do not engage in formal cessation activities, a 2- study and a 2+ study have both found that an enriched environment increases the motivation of smokers to change their smoking behaviours and may lead to a reduction in cigarette consumption and a reduction in perceived barriers to quitting. Although these findings are based on American studies, their findings are likely to be broadly applicable to a UK setting.

Evidence statement 13

Two 2++ studies indicate that a key factor predicting whether a workplace will offer smoking cessation support is the personal attitude of the employer towards employee health. So, a key way of encouraging employers to provide smoking cessation support may be to directly target leaders and persuade them of the benefits of investing in employee health and the role it plays in company success.

Current practice research

Summary of findings from a research study of smoking cessation services and smokefree Scotland and Ireland.

Experience from Scotland and Ireland suggest that the demand for smoking cessation services will increase in the run up to the smoking ban in England on 1 July, and that it will be linked to media activity.

Smoking cessation services will face an increase in the number of employers wishing to use their services and an increase in demand from smokers. It will

be important to be able to absorb the extra demand from both routes. Some smokers may go to GPs or purchase NRT themselves but, provided they have a high profile, NHS smoking cessation services should be able to attract some of these smokers, so optimising their chances of quitting.

While the case studies of good practice indicate that NHS smoking cessation services ran interventions on-site, this might not be possible in the run up to 1 July, particularly if smaller employers contact them. It might be more feasible to recruit advisers who can work both in the workplace and the community, so that there is a flexible response to demand.

Nevertheless the increase in demand will have an impact on the resources needed by these services.

Cost-effectiveness evidence

Summary of findings from the literature review of cost effectiveness

Overall, there is limited information on the cost effectiveness of workplace smoking cessation policies.

Ten studies were included in the review. Two were obtained from the workplace cost-effectiveness searches, five from cost-effectiveness searches undertaken for NICE programme guidance on smoking, and three were taken from a systematic review identified during the workplace cost-effectiveness search. There were three cohort studies, two surveys, three randomised controlled trials (RCTs), one economic analysis and one systematic review. Studies were carried out in the US, Australia and the UK.

There was some evidence that workplace interventions are cost-effective (two 1+ studies, one 2- study and one 2++ study). From an employer's perspective, bupropion is cost-effective when provided with or without counselling. Employers gain the greatest net cost benefit when employees combine using a nicotine patch with a consultation with a pharmacist and participation in a formal smoking cessation programme.

A large systematic review carried out by the Cochrane collaboration group concluded that, while the effectiveness evidence for workplace interventions is strong, there was limited evidence on cost-effectiveness. A 2+ study investigated the cost of smoking in the workplace for employers in Scotland. It found that the total cost for all employers in Scotland was around £450 million; £40 million as a result of higher rates of absenteeism among smokers, and £4 million as a result of fire damage. However, this estimate was highly dependent on the following assumptions:

- 30 minutes would be lost each day, per smoker, if a room has been set aside for people to smoke (also assuming that they smoke five cigarettes a day)
- 10 minutes a day would be lost per smoker at worksites which are smokefree or have no policy
- 53% of buildings have smoking rooms, 34% are ‘smoker free’ and 7% have no policy on workplace smoking.

A 2- study investigated the effect of employee health insurance plans on their demand for, and use of, smoking cessation services. The use of smoking cessation services varied according to the level of insurance cover. The insurance plans included cover for NRT and a behavioural programme named ‘Free and Clear’.

Summary of findings from cost-effectiveness modelling

This section will be completed in the final guidance.

Appendix B: gaps in the evidence

PHIAC identified a number of gaps in the evidence related to the interventions under examination. These gaps are set out below and are based on the full set of evidence statements that can be found at: www.nice.org.uk/page.aspx?o=350204%20

1. The effectiveness of interventions for different sectors of the workforce such as men and women, younger and older workers, minority ethnic groups and temporary/casual workers.
2. The ways that employers can encourage and support employees who smoke to quit.
3. The ways that employers can be encouraged to provide smoking cessation support.
4. The resource needs of small, medium and large employers with regard to providing smoking cessation support.
5. The cost effectiveness of workplace interventions and the long-term benefits.

Appendix C: membership of the Public Health Interventions Advisory Committee

NICE has set up a standing committee, the Public Health Interventions Advisory Committee (PHIAC), which reviews the evidence and develops recommendations on public health interventions.
Membership of PHIAC is multidisciplinary, comprising public health practitioners, clinicians (both specialists and generalists), local authority employees, representatives of the public, patients and/or carers, academics and technical experts as follows.

Mrs Cheryll Adams Professional Officer for Research and Practice Development with the Community Practitioners' and Health Visitors' Association (CPHVA)

Professor Sue Atkinson CBE Independent Consultant and Visiting Professor, Department of Epidemiology and Public Health, University College London

Professor Michael Bury Emeritus Professor of Sociology at the University of London and Honorary Professor of Sociology at the University of Kent

Professor Simon Capewell Chair of Clinical Epidemiology, University of Liverpool

Professor K K Cheng Professor of Epidemiology, University of Birmingham

Mr Philip Cutler Forums Support Manager, Bradford Alliance on Community Care

Professor Brian Ferguson Director of the Yorkshire and Humber Public Health Observatory

Professor Ruth Hall Regional Director, Health Protection Agency South West

Ms Amanda Hoey Director, Consumer Health Consulting Limited

Mr Andrew Hopkin Senior Assistant Director for Derby City Council

Dr Ann Hoskins Deputy Regional Director of Public Health for NHS North West

Ms Muriel James Secretary for the Northampton Healthy Communities Collaborative and the King Edward Road Surgery Patient Participation Group

Professor David R Jones Professor of Medical Statistics in the Department of Health Sciences, University of Leicester

Dr Matt Kearney General Practitioner, Castlefields, Runcorn. GP Public Health Practitioner, Knowsley

Ms Valerie King Designated Nurse for Looked After Children for Northampton PCT, Daventry and South Northants PCT and Northampton General Hospital. Public Health Skills Development Nurse for Northampton PCT

CHAIR Dr Catherine Law Reader in Children's Health, Institute of Child Health, University College London

Ms Sharon McAteer Health Promotion Manager, Halton PCT

Professor Klim McPherson Visiting Professor of Public Health Epidemiology, Department of Obstetrics and Gynaecology, University of Oxford

Professor Susan Michie Professor of Health Psychology, BPS Centre for Outcomes Research & Effectiveness, University College London

Dr Mike Owen General Practitioner, William Budd Health Centre, Bristol

Ms Jane Putsey Lay Representative. Chair of Trustees of the Breastfeeding Network

Dr Mike Rayner Director of the British Heart Foundation Health Promotion Research Group, Department of Public Health, University of Oxford

Mr Dale Robinson Chief Environmental Health Officer for South Cambridgeshire District Council

Professor Mark Sculpher Professor of Health Economics at the Centre for Economics (CHE), University of York

Dr David Sloan Retired Director of Public Health

Dr Dagmar Zeuner Consultant in Public Health with Islington PCT

Expert cooptees from the NICE Programme Development Group on Smoking Cessation:

Deborah Arnott Director of Action on Smoking and Health (ASH)

Ian Gray Policy Officer – Health Development, Chartered Institute of Environmental Health

Andrew Hayes Regional Tobacco Control Policy Manager, London

Paul Hooper Regional Tobacco Control Policy Manager, West Midlands

Sir Alexander Macara Chair of the NICE Programme Development Group on Smoking Cessation

Appendix D: summary of the methods used to develop this guidance

Introduction

The reports of the review and economic analysis include full details of the methods used to select the evidence (including search strategies), assess its quality and summarise it. In addition, two studies were commissioned to provide information on current service provision The first study examined NHS Stop Smoking Services in England and learning from Scotland and Ireland following the introduction of legislation to make workplaces smokefree. The second study, a survey of small and medium employers, explored issues relating to the provision of workplace smoking cessation support. [The results will be published with the final guidance document.]

The minutes of the PHIAC meetings provide further detail about the Committee's interpretation of the evidence and development of the recommendations.

All supporting documents are listed in appendix E and are available from the NICE website at: www.nice.org.uk/page.aspx?o=350204%20

The guidance development process

The stages of the guidance production process are outlined in the box below:

1. Draft scope
2. Stakeholder meeting
3. Stakeholder comments
4. Final scope and responses published on website
5. Reviews and cost-effectiveness modelling
6. Synopsis report of the evidence (executive summaries and evidence tables) circulated to stakeholders for comment
7. Comments and additional material submitted by stakeholders
8. Review of additional material submitted by stakeholders[1]
9. Synopsis, full reviews, supplementary reviews and economic modelling submitted to PHIAC
10. PHIAC produces draft recommendations
11. Draft recommendations published for comment by stakeholders
12. Responses to comments published
13. PHIAC amends recommendations
14. Final guidance published on website

Key questions

The key questions were established as part of the scope. They formed the starting point for the reviews of evidence and facilitated the development of recommendations by PHIAC.

- Which interventions are effective in the workplace?
- Which interventions work best in workplaces where comprehensive smokefree legislation has been introduced in other jurisdictions?
- What are the most effective and appropriate interventions for different sectors of the workforce such as men and women, younger and older workers, minority ethnic groups and temporary/casual workers?
- What are the most effective ways of encouraging employee compliance with a smokefree policy?

[1] Submitted material is screened against inclusion criteria used in the reviews.

- How can employers support and encourage smokers to quit?
- What support can employers offer smokers who are not currently ready to quit?
- How can employers be encouraged to provide smoking cessation support?
- What are the resource needs of large, medium and small enterprises in implementing smokefree legislation and supporting smokers to quit?
- Which interventions are cost effective?

Reviewing the evidence of effectiveness

A review of effectiveness was conducted.

Identifying the evidence
The following databases were searched in four stages, as follows.

Stage 1
The search for systematic reviews and reviews was undertaken in the following databases for the years 1990–2006: Cochrane database of systematic reviews; DARE; National Research Register; Health Technology Assessment Database; SIGN Guidelines; National Guideline Clearinghouse; HSTAT; TRIP; Medline (1966–May 2006); Embase (1974–2006); CINAHL (1982–2006); British Nursing Index (1994–2006); PsycINFO (1806–2006); DH-Data (1983–2006); King's Fund (1979–2006).

Stage 2
The search for other publications was undertaken in the following databases: Medline (1966–May 2006); Embase (1974–2006); CINAHL (1982–2006); British Nursing Index (1994–2006); PsycINFO (1806–2006); DH-Data (1983–2006); King's Fund (1979–2006); CENTRAL (2006/2).

Stage 3
A further search of Medline was undertaken for abstracts (as well as titles) of all publications.

Stage 4
A search was undertaken of the following websites to identify any additional reports and documents of relevance.

- UK National Smoking Cessation Conference: www.uknscc.org/index.html (presentations were searched)
- Department of Health: www.dh.gov.uk
- National Health Service: www.nhs.uk
- Action on Smoking and Health: www.ash.org.uk
- Action on Smoking and Health Scotland: www.ashscotland.org.uk
- ASH Scotland: www.ashscotland.org.uk
- Scottish Executive: www.scotland.gov.uk
- Government of Ireland: www.irlgov.ie/
- Quit: www.quit.org.uk

Full details of the search terms and strategies are included in the review report.

Selection criteria

Studies were included if they covered:

- smokers aged 16 and over
- workplace smoking cessation interventions delivered either at work or externally.

Studies were excluded if they described workplace health improvement programmes that did not include a smoking related component.

Quality appraisal

Included papers were assessed for methodological rigour and quality using the NICE methodology checklist, as set out in the NICE technical manual 'Methods for development of NICE public health guidance' (see appendix E). Each study was described by study type, categorised as types 1–4) and graded (++, +, -) to reflect the risk of potential bias arising from its design and execution:

Study type

- Meta-analyses, systematic reviews of RCTs or RCTs (including cluster RCTs).

- Systematic reviews of, or individual, non-randomised controlled trials, case-control studies, cohort studies, controlled before-and-after (CBA) studies, interrupted time series (ITS) studies, correlation studies.
- Non-analytical studies (for example, case reports, case series).
- Expert opinion, formal consensus.

Study quality

++ All or most of the criteria have been fulfilled. Where they have not been fulfilled the conclusions are thought very unlikely to alter.

+ Some criteria have been fulfilled. Those criteria that have not been fulfilled or not adequately described are thought unlikely to alter the conclusions.

Few or no criteria fulfilled. The conclusions of the study are thought likely or very likely to alter.
Study type and quality were described together. For example, as (1++) or (2-).
The studies were also assessed for their applicability to the UK.
Summarising the evidence and making evidence statements
The review data was summarised in evidence tables (see full reviews and synopsis). Outcomes of interest included non-validated and validated measures of smoking behaviour. In the case of Cochrane reviews, effectiveness studies were only included if they had a follow-up after 6 months or longer. The findings from the review were synthesised and used as the basis for a number of evidence statements relating to each key question. The evidence statements reflect the strength (quantity, type and quality) of evidence and its applicability to the populations and settings in the scope.

Surveys of current practice

- An online survey of NHS Stop Smoking Service coordinators.
- Case studies of good practice from NHS Stop Smoking Services.
- Telephone and face to face interviews and document analysis to collate and synthesise evidence on the impact of smokefree legislation in Ireland, Scotland and Guernsey.

- A telephone survey of around 300 decision makers in small and medium enterprises. The aims were to identify awareness of the forthcoming smokefree legislation and to explore whether they have been – or plan to – offer smoking cessation support to employees.

Economic appraisal

The economic appraisal consisted of a review of economic evaluations and a cost-effectiveness analysis.

Review of economic evaluations

A systematic search was carried out on the NHS EED database and the Centre for Reviews and Dissemination (CRD) internal database. This was supplemented by material found in the effectiveness and cost-effectiveness reviews undertaken for the smoking cessation programme.

The criteria for inclusion in the review were as follows:

- studies included a specific intervention to assist smoking cessation
- the study population was smoking at the start of the study (unless drawn from a general population)
- studies reported both the cost and effectiveness of the smoking cessation intervention (although costs and effectiveness were not necessarily combined into a single cost-effectiveness ratio).

Ten studies met the inclusion criteria. These were assessed for their methodological rigor and quality using the critical appraisers' checklists provided in appendix B of the 'Methods for development of NICE public health guidance' (see table 3.1). Each study was categorised by study type and graded using a code '++', '+' or '-', based on the potential sources of bias.

Cost-effectiveness analysis

An economic model is being constructed to incorporate data from the reviews of effectiveness and cost effectiveness. The aim is to estimate the cost effectiveness of workplace smoking cessation interventions which meet the inclusion criteria.

Further information on the modelling will be available in the final guidance document.

How PHIAC formulated the recommendations

At its meetings in November and December 2006, PHIAC considered the evidence of effectiveness and cost effectiveness and comments from stakeholders to determine:

- whether there was sufficient evidence (in terms of quantity, quality and applicability) to form a judgement
- whether, on balance, the evidence demonstrates that the intervention is effective or ineffective, or whether it is equivocal
- where there is an effect, the typical size of effect.

PHIAC developed draft recommendations through informal consensus, based on the following criteria.

- Strength (quality and quantity) of evidence of effectiveness and its applicability to the populations/settings referred to in the scope.
- Effect size and potential impact on population health and/or reducing inequalities in health.
- Cost effectiveness (for the NHS and other public sector organisations).
- Balance of risks and benefits.
- Ease of implementation and the anticipated extent of change in practice that would be required.

PHIAC also considered whether research should be a condition for a recommendation, where evidence was lacking.

Where possible, recommendations were linked to an evidence statement(s) – see appendix A for details. Where a recommendation was inferred from the evidence, this was indicated by the reference 'IDE' (inference derived from the evidence).

Appendix E: supporting documents

Supporting documents are available from the NICE website (www.nice.org.uk/page.aspx?o=350204). These include the following.

- Summary of evidence of effectiveness of smoking cessation interventions in the workplace
- Evidence tables for the effectiveness review
- Main report of the effectiveness review
- Review of the economic literature
- Research report on activities.

Other supporting documents include:

- 'Methods for development of NICE public health guidance' available from: www.nice.org.uk/page.aspx?o=299970
- 'The public health guidance development process: An overview for stakeholders including public health practitioners, policy makers and the public' available from: www.nice.org.uk/page.aspx?o=299973