NICE National Institute for Health and Care Excellence

NICE guideline

Smoking: workplace interventions

Public health guideline

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Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Contents

This guideline is replaced by NG209.

This guideline should be read in conjunction with PH10 and PH13.

Overview

Update information

November 2021: NICE guideline PH5 (April 2007) has been updated and replaced by NG209.

This guideline contains the evidence and committee discussion for recommendations from PH5 dated [2007] and [2007, amended 2021].

See www.nice.org.uk/guidance/NG209 for all the current recommendations and the evidence behind them.

This guideline covers how employers can encourage and support employees to stop smoking. It aims to reduce the number of people who smoke or are exposed to second-hand smoke and the rate of diseases and conditions caused by smoking.

Who is it for?

- Employers, including local authorities and the community, voluntary and private sectors
- Employee and trade union representatives
- Healthcare professionals
- Commissioners and providers
- People who work at smoking cessation services
- People over 16 who smoke and are in paid or voluntary employment outside their own home
- Members of the public

Introduction

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 for NHS and non-NHS professionals and employers who have a role in – or responsibility for – supporting and encouraging employees who smoke to quit. This includes those working in local authorities and the community, voluntary and private sectors.

The Public Health interventions Advisory Committee (PHIAC) has considered a review of the evidence, an economic appraisal, a survey of current practice and stakeholder comments in developing these recommendations.

Details of PHIAC membership are given in appendix C. The methods used to develop the guidance are summarised in appendix D. Supporting documents used in the preparation of this document are listed in appendix E. Full details of the evidence collated, are available, along with a list of the stakeholders involved and their comments.

1 Recommendations

This document constitutes the Institute's formal guidance on how to encourage and support employees to stop smoking.

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

Reducing smoking and tobacco-related harm is a key government strategy for improving the health of people in England and reducing health inequalities. After 1 July 2007, smoking will be prohibited in virtually all enclosed public places and workplaces in England. This includes vehicles used for business and any rooms or shelters previously set aside for smoking (if they are enclosed or substantially enclosed, according to the definition of the law). Failure to comply will be an offence.

Employers are not legally obliged to help employees to stop smoking. However, employers that do provide cessation support could reduce the risk of non-compliance with the law, as well as taking advantage of the opportunity it offers to improve people's health. They will be promoting healthy living and no smoking within society, as well as benefiting from reduced sickness absence and increased productivity.

The following smoking cessation interventions, as defined below, have been proven to be effective.

Brief interventions

Brief interventions for smoking cessation involve opportunistic advice, discussion, negotiation or encouragement and are delivered by a range of primary and community care professionals, typically within 5–10 minutes. The package provided depends on a number of factors including the individual's willingness to quit, how acceptable they find the intervention and previous methods they have used. It may include one or more of the following:

- simple opportunistic advice
- an assessment of the individual's commitment to quit
- pharmacotherapy and/or behavioural support
- self-help material

- referral to more intensive support such as the NHS Stop Smoking Services.

(NICE 2006a; NICE 2006b).

Individual behavioural counselling

This is a face to face encounter between someone who smokes and a counsellor trained in assisting smoking cessation.
(Lancaster and Stead 2005a; NICE 2006b; NICE 2006c)

Group behaviour therapy

Group behaviour therapy programmes involve scheduled meetings where people who smoke receive information, advice and encouragement and some form of behavioural intervention (for example, cognitive behavioural therapy) delivered over at least two sessions.
(NICE 2006b; NICE 2006c; Stead and Lancaster 2005)

Pharmacotherapies

Stop smoking advisers and healthcare professionals may recommend and prescribe nicotine replacement therapy (NRT) or bupropion as an aid to help people to quit smoking, along with giving advice, encouragement and support. Before prescribing a treatment, they take into account the person's intention and motivation to quit and how likely it is they will follow the course of treatment. They also consider which treatments the individual prefers, whether they have attempted to stop before (and how), and if there are medical reasons why they should not be prescribed NRT or bupropion.
(NICE 2002; NICE 2006b)

Self-help materials

Self-help materials comprise any manual or structured programme, in written or electronic format, that can be used by individuals in a quit attempt without the help of health professionals, counsellors or group support. Materials can be aimed at anyone who smokes, particular populations (for example, certain age or ethnic groups) or may be interactively tailored to individual need. (Lancaster and Stead 2005b; NICE 2006b)

Telephone counselling and quitlines

Telephone counselling and quitlines provide proactive or reactive advice, encouragement and support over the telephone to anyone who smokes who wants to quit, or who has recently quit.

Recommendation 1

Who should take action?

Employers.

What action should they take?

- Publicise the interventions identified in this guidance and make information on local stop smoking support services widely available at work. This information should include details on the type of help available, when and where, and how to access the services.
- Be responsive to individual needs and preferences. Where feasible, and where there is sufficient demand, provide on-site stop smoking support.
- Allow staff to attend smoking cessation services during working hours without loss of pay.
- Develop a smoking cessation policy in collaboration with staff and their representatives as one element of an overall smokefree workplace policy.

Recommendation 2

Who should take action?

Employees who want to stop smoking.

What action should they take?

Contact local smoking cessation services, such as the NHS Stop Smoking Services, for information, advice and support.

Recommendation 3

Who should take action?

Employees and their representatives.

What action should they take?

Encourage employers to provide advice, guidance and support to help employees who want to stop smoking.

Recommendation 4

Who should take action?

All those offering smoking cessation services including the NHS, independent or commercial organisations and employers.

What action should they take?

- Offer one or more interventions that have been proven to be effective (see above).
- Ensure smoking cessation support and treatment is delivered only by staff who have received training that complies with the Standard for training in smoking cessation treatments).
- Ensure smoking cessation support and treatment is tailored to the employee's needs and preferences, taking into account their circumstances and offering locations and schedules to suit them.

Recommendation 5

Who should take action?

Managers of NHS Stop Smoking Services.

What action should they take?

- Offer support to employers who want to help their employees to stop smoking. Where appropriate and feasible, provide support on the employer's premises.

- If initial demand exceeds the resources available, focus on the following:
  - small and medium-sized enterprises (SMEs)
  - enterprises where a high proportion of employees are on low pay
  - enterprises where a high proportion of employees are from a disadvantaged background
  - enterprises where a high proportion of employees are heavy smokers.

Recommendation 6

Who should take action?

Strategic health authorities and primary care trusts.

What action should they take?

Ensure local NHS Stop Smoking Services are able to respond to fluctuations in demand, particularly before and after implementation of smokefree legislation.

2 Public health need and practice

Smoking is 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). It is also a major factor contributing to health inequalities.

A wide range of diseases and conditions are caused by smoking including: cancers, respiratory disease, coronary heart and other circulatory diseases, stomach/duodenal ulcer, impotence and infertility, complications in pregnancy and low birthweight. 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. For example, 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 estimated to be responsible for the deaths of 617 employees per year in the UK (about two employed people per working day) (Jamrozik 2005).

Smoking is estimated to cost the NHS in England up to £1.5 billion a year (Parrott et al. 1998). Extrapolating from a study in Scotland (Parrott et al. 2000) it costs industry a further £5 billion in terms of lost productivity, higher rates of absenteeism among people who smoke and fire damage.

Reducing levels of smoking among employees will help reduce some illnesses and conditions (such as cardiovascular disease and respiratory diseases) that are important causes of sickness absence. This will result in improved productivity and less costs for employers.

The workplace has several advantages as a setting for smoking cessation interventions:

- 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 no smoking working environment encourages people who smoke to quit.

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 regulations resulting from the 2006 Health Act come into force on 1 July 2007.

3 Considerations

PHIAC took account of a number of factors and issues in making the recommendations.

3.1 Organisations which encourage and support employees who smoke to quit will benefit from a more productive workforce, improvements in staff morale and a healthier, smokefree environment. They will also help to promote no smoking within society.

3.2 PHIAC has drawn on three sources of evidence to identify a wide range of proven smoking cessation interventions. These comprise: 'Cochrane reviews of smoking cessation'; reviews of effectiveness carried out for the NICE smoking cessation programme (currently in development); and the 'NICE evidence review for workplace interventions to promote smoking cessation'. Methods that have been proven to be effective in other settings also appear to be effective in the workplace.

3.3 Currently, smoking cessation services are least likely to attract people from sectors of the population where smoking rates are particularly high. If services fail to address this inequity adequately, health inequalities are likely to increase.

3.4 It often takes several attempts to quit smoking permanently and people need encouragement and support throughout this process. They also need congratulating once they have quit.

3.5 Based on experience in other countries where similar legislation has been introduced, NHS Stop Smoking Services will need advance notice of any media or public relations activities introduced in relation to the legislation.

In both the Republic of Ireland and Scotland, demand for help to stop smoking increased dramatically in response to publicity before the smokefree legislation came into force. However, it declined following implementation of the legislation. This suggests there may be an initial surge in demand from people who smoke in England. Services may wish to consider a range of approaches to meet this demand and so maximise the opportunity it offers to improve people's health. These could include providing on-site services and recruiting trained advisers who can offer support both in the workplace and the community.

3.6 It is important that the DH ensures that the database of NHS Stop Smoking Services is publicly available and is kept up to date. The services and their location need to be publicised so that employers can provide their employees with the help they need to quit.

3.7 PHIAC notes that employers may need encouragement to provide their employees with smoking cessation support. This may be achieved by persuading business leaders of the benefits of investing in employee health.

4 Recommendations for research

PHIAC recommends that the following research questions should be addressed in order to improve the evidence relating to workplace smoking cessation.

1. What are the most effective and cost-effective smoking cessation interventions for different sectors of the workforce including:

- men and women
- younger and older workers
- minority ethnic groups
- temporary/casual workers
- employees who, as part of their job, go into the homes of people who smoke.

2. What are the most effective and cost effective ways for employers to encourage and support employees who smoke to quit?

3. How can employers be encouraged to provide smoking cessation support?

4. What are the short and long-term benefits for employers of providing staff with smoking cessation support and treatment?

5. How can local NHS Stop Smoking Services provide employees of small, medium and large enterprises with effective and cost-effective smoking cessation support and treatments?

More detail on the evidence gaps identified during the development of this guidance is provided in appendix B.

5 References

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smoking cessation interventions. Thorax 53: 2–37.

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

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

This appendix sets out the recommendations and the associated evidence statements taken from a review of effectiveness, a review of the economic literature and an economic model (see appendix D for the key to study types and quality assessments). It also includes details of a survey of current practice.

Recommendations are followed by the evidence statement(s) underpinning 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'. 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).

The following smoking cessation interventions, as defined below, have been proven to be effective.

Brief interventions

Brief interventions for smoking cessation involve opportunistic advice, discussion, negotiation or encouragement and are delivered by a range of primary and community care professionals, typically within 5–10 minutes. The package provided depends on a number of factors including the individual's willingness to quit, how acceptable they find the intervention and previous methods they have used. It may include one or more of the following:

- simple opportunistic advice
- an assessment of the individual's commitment to quit
- pharmacotherapy and/or behavioural support
- self-help material
- referral to more intensive support such as the NHS Stop Smoking Services.

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This is a face to face encounter between someone who smokes and a counsellor trained in assisting smoking cessation.
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(NICE 2002; NICE 2006b)

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Self-help materials comprise any manual or structured programme, in written or electronic format, that can be used by individuals in a quit attempt without the help of health professionals, counsellors or group support. Materials can be aimed at anyone who smokes, particular populations (for example, certain age or ethnic groups) or may be interactively tailored to individual need. (Lancaster and Stead 2005b; NICE 2006b)

Telephone counselling and quitlines

Telephone counselling and quitlines provide proactive or reactive advice, encouragement and support over the telephone to anyone who smokes who wants to quit, or who has recently quit.
(Stead et al 2006; NICE 2006b; NICE 2006c)

Recommendation 1

Who should take action?

Employers.

What action should they take?

- Publicise the interventions identified in this guidance and make information on local stop smoking support services widely available at work. This information should include details on the type of help available, when and where, and how to access the services.
- Be responsive to individual needs and preferences. Where feasible, and where there is sufficient demand, provide on-site stop smoking support.
- Allow staff to attend smoking cessation services during working hours without loss of pay.
- Develop a smoking cessation policy in collaboration with staff and their representatives as one element of an overall smokefree workplace policy.

(Evidence statements 1, 2, 5, 6, 7, 8, 10, 11, 12, 13, 15, IDE)

Recommendation 2

Who should take action?

Employees who want to stop smoking.

What action should they take?

Contact local smoking cessation services, such as the NHS Stop Smoking Services, for information, advice and support.

(IDE)

Recommendation 3

Who should take action?

Employees and their representatives.

What action should they take?

Encourage employers to provide advice, guidance and support to help employees who want to stop smoking.

(IDE)

Recommendation 4

Who should take action?

All those offering smoking cessation services including the NHS, independent or commercial organisations and employers.

What action should they take?

- Offer one or more interventions that have been proven to be effective (see above).
- Ensure smoking cessation support and treatment is delivered only by staff who have received training that complies with the 'Standard for training in smoking cessation treatments'.
- Ensure smoking cessation support and treatment is tailored to the employee's needs and preferences, taking into account their circumstances and offering locations and schedules to suit them.

(Evidence statements 1, 2, 5, 6, 7, 8, 11, 13)

Recommendation 5

Who should take action?

Managers of NHS Stop Smoking Services.

What action should they take?

- Offer support to employers who want to help their employees to stop smoking. Where appropriate and feasible, provide support on the employer's premises.

- If initial demand exceeds the resources available, focus on the following:
  - small and medium-sized enterprises (SMEs)
  - enterprises where a high proportion of employees are on low pay
  - enterprises where a high proportion of employees are from a disadvantaged background
  - enterprises where a high proportion of employees are heavy smokers.

(Evidence statements 1, 2, 16)

Recommendation 6

Who should take action?

Strategic health authorities and primary care trusts.

What action should they take?

Ensure local NHS Stop Smoking Services are able to respond to fluctuations in demand, particularly before and after implementation of smokefree legislation.

(Survey of current practice)

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 1-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 5

A 1 (+) study and a 2 (++) study found that men and women were equally successful in achieving abstinence in workplace smoking cessation programmes; however, important gender differences were apparent in smoking attitudes and behaviours. Women had less confidence in their ability to quit and required extra stimuli in order to quit smoking. Although these findings are based on American studies, they are likely to be broadly applicable to a UK setting.

Evidence statement 6

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 7

A 2 (+) study found that although there are ethnic differences in baseline smoking patterns and attitudes towards cessation, ethnicity was not a significant predictor of successful abstinence. Another 1 (+) study found that a tailored intervention which incorporated linguistically and culturally appropriate materials, was effective in promoting behaviour change in a working class multi-ethnic population. Although these studies are from the USA, which has a different ethnic composition to the UK, it is likely that their findings are broadly applicable to a UK setting.

Evidence statement 8

No studies were identified in the literature search that specifically addressed effective workplace interventions for temporary or casual workers. As delivering workplace interventions to this population pose a significant challenge, research is urgently needed in this area.

Evidence statement 10

Various 4 (+) sources have indicated that creating and enforcing a smoking compliance strategy is an effective way to increase compliance. Specific tips for enforcing smokefree policy include providing training on how to enforce the policy, establishing links between the policy and HR policies, increasing awareness of the consequences of breaching policy, providing reminders that it is a criminal offence not to comply with smokefree legislation and notifying staff that action will be taken if someone is in breach of the policy.

Evidence statement 11

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 12

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 13

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 15

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.

Evidence statement 16

Two 2 (++) American studies, one 2 (-) Canadian study and one 2 (+) Scottish study provide strong evidence that small enterprises are far less likely to offer smoking cessation support than large enterprises. The findings of these studies suggest that small workplaces may have significant financial constraints that impede their ability to offer smoking cessation support and may also have characteristics that do not lend themselves to formal onsite programmes. Thus, unlike large enterprises, small enterprises have substantial needs in implementing smoking control activities in their worksite. As the conclusions of the US studies are echoed in a Scottish study, these findings are likely to be directly applicable to a UK setting.

Survey of current practice

Summary of findings from the experiences of smokefree Scotland and Ireland and a study of smoking cessation services in England

The Scottish and Irish experience of introducing smokefree legislation suggests that the demand for smoking cessation services will increase in the run-up to the smoking ban in England on 1 July. It also suggests that this demand will be linked to media activity.

Smoking cessation services are likely to face an increase in the number of employers wishing to use their services and an increase in demand direct from people who smoke. It is important to ensure resources are in place to meet the extra demand for smoking cessation services and treatments.

Cost-effectiveness evidence

Summary of findings from the literature review

Overall, there is limited information on the cost effectiveness of workplace smoking cessation interventions, but the studies that were identified in the review suggest that they are cost effective.

Summary of findings from modelling the health benefits

The model aimed to estimate the cost effectiveness of smoking cessation interventions delivered in the workplace. These included:

- brief advice
- brief advice plus self-help material
- brief advice, self-help material and advice on using nicotine replacement therapy (NRT)
- brief advice, self-help material, advice on using NRT and specialist support.

All interventions led to a reduction in the number of people who smoke, fewer comorbidities and more years of good health (QALYs) compared to 'no intervention'.

Summary of findings from modelling the net financial benefit to employers

All interventions reduced the number of employees who smoke, leading to increased productivity compared to 'no intervention'. Cessation rates were directly linked to productivity: a high cessation rate led to lower associated productivity losses.

The net financial benefit for employers was calculated by subtracting the cost of the intervention from the productivity benefits. Most interventions begin to produce a net financial benefit after 2 years. Some of the cheaper interventions lead to a net financial benefit after 1 year.

Full details of the surveys of current practice and reviews of cost effectiveness and modelling are available.

Appendix B: gaps in the evidence

PHIAC identified a number of gaps in the evidence relating to the interventions under examination, based on an assessment of the evidence and stakeholder comments. These gaps are set out below.

1. The cost effectiveness of workplace interventions and the long-term benefits.

2. Comparisons of 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.

3. The effectiveness of workplace smoking cessation interventions in populous countries with national legislation that prohibits smoking in virtually all enclosed public places and workplaces.

4. The ways that employers can encourage and support employees who smoke to quit.

5. The ways that employers can be encouraged to provide smoking cessation support.

6. The resource needs of small, medium and large employers with regard to providing smoking cessation support.

7. The long-term business benefits of providing workplace smoking cessation support.

The Committee made five recommendations for research.

Appendix C: membership of the Public Health Interventions Advisory Committee (PHIAC), the NICE Project Team and external contractors

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 CherylIAdams 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 in the 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

Dr Richard Cookson Senior Lecturer, Department of Social Policy and Social Work, University of York

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 and 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 British Heart Foundation Health Promotion Research Group, Department of Public Health, University of Oxford

Mr Dale Robinson Chief Environmental Health Officer, 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, 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

NICE Project Team

Professor Mike Kelly
CPHE Director

Tricia Younger
Associate Director

Dr Lesley Owen
Lead Analyst

Patti White
Analyst

Dr Hugo Crombie
Analyst

Dr Alastair Fischer

Health Economics Adviser.

External contractors

The British Columbia Centre of Excellence for Women's Health carried out the review of effectiveness. The authors were; Dr Kirsten Bell, Lucy McCulloch, Karen DeVries, Dr Lorraine Greaves and Natasha Jategaonkar.

Professor Ann McNeill and Adam Crosier carried out research on current service provision and provided expert testimony;

The York Health Economics Consortium carried out the economic appraisal. The authors were: Paul Trueman, Sarah Flack and Dr Matthew Taylor.

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, a study was commissioned on current service provision. The first part of the study examined NHS Stop Smoking Services in England through case studies and an on-line survey of NHS Stop Smoking Services coordinators. The second part of the study examined learning from Scotland and Ireland, following the introduction of legislation to make workplaces smokefree.

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.

The guidance development process

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. The overarching question was:

Which interventions are effective and cost effective in the workplace?

The subsidiary questions were:

- Which interventions work best in workplaces where comprehensive smokefree legislation has been introduced?
- 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?
- How can employers support and encourage people who smoke to quit?
- What support can employers offer people who smoke and 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 helping people who smoke 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 (presentations were searched)
- Department of Health
- National Health Service
- Action on Smoking and Health
- Action on Smoking and Health Scotland
- Scottish Executive
- Government of Ireland
- Quit

Further details of the databases, search terms and strategies are included in the review report.

Selection criteria

Studies were included if they covered:

- people who smoke 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.

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.

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 (classified 1–4) and graded (++, +, -) to reflect the risk of potential bias arising from its design and execution.

Study type

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

2. 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.

3. Non-analytic studies (for example, case reports, case series studies).

4. Expert opinion, formal consensus.

Study quality

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

+ Some criteria 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 design and quality were combined. For example, a type 1 study fulfilling most criteria and a type 2 study fulfilling very few criteria would appear in the format 1 (++) and 2 (-) respectively. Each review includes a number of evidence statements that reflect the strength (quantity, type and quality) of evidence.

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). The findings from the review were synthesised and used as the basis for a number of evidence statements relating to each question. The evidence statements reflect the strength (quantity, type and quality) of the evidence and its applicability to the populations and settings in the scope.

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 NICE smoking cessation programme (under development).

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 on both the cost and effectiveness of the smoking cessation intervention (although cost and effectiveness was not necessarily combined into a single cost-effectiveness ratio).

Ten studies met the inclusion criteria. These were assessed for their methodological rigour 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 was constructed to incorporate data from the reviews of effectiveness and cost effectiveness. The results are reported in: 'Cost effectiveness of interventions for smoking cessation' (Flack et al. 2007a) and 'Cost impact analysis of workplace-based interventions for smoking cessation' (Flack et al. 2007b). The economic model and results are available on the NICE website.

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 interventions are 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 a recommendation should only be implemented as part of a research programme 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).

The draft guidance including the recommendations was released for consultation in December 2006. The guidance was signed off by the NICE Guidance Executive in March 2007.

Appendix E: supporting documents

Supporting documents are available from the NICE website. These include the following:

- Review of effectiveness
- Economic analysis: review and modelling report
- Survey of current practice.

Finding more information and committee details

You can see everything NICE says on this topic in the NICE Pathway on smoking.

To find NICE guidance on related topics, including guidance in development, see the NICE webpage on smoking and tobacco.

For full details of the evidence and the guideline committee's discussions, see the evidence reviews. You can also find information about how the guideline was developed, including details of the committee.

NICE has produced tools and resources to help you put this guideline into practice. For general help and advice on putting our guidelines into practice, see resources to help you put NICE guidance into practice.

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