NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

PUBLIC HEALTH DRAFT GUIDANCE

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Reducing the rate of premature deaths from cardiovascular disease and other smoking-related diseases: finding and supporting those most at risk and improving access to services

NICE public health guidance X

Introduction

The Department of Health asked the National Institute for Health and Clinical Excellence (NICE or the Institute) to produce public health guidance on what works in driving down population mortality rates in disadvantaged areas, where risk of early death is higher than average, with particular reference to proactive case finding and retention and access to services.

The recommendations have been developed for two areas: smoking cessation and the provision of statins. Although the referral specified a focus on people in disadvantaged areas, the recommendations are relevant for all those who are disadvantaged, regardless of where they live.

The guidance is for NHS and other professionals who have a direct or indirect role in, and responsibility for, services aimed at people who are disadvantaged. This includes those working in local authorities and the wider public, voluntary and community sectors. It may also be of interest to members of the public.

NICE guidance on community engagement, behaviour change, smoking cessation, statins and lipid modification complement and support this guidance (for further details, see section 7).

The Public Health Interventions Advisory Committee (PHIAC) has considered both the reviews of the evidence and the economic appraisal.

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 reducing premature deaths among people where the risk is higher than average by finding and supporting them and improving their access to services. The recommendations made in section 1 are provisional and may change after consultation with stakeholders and fieldwork.

The process the Institute will follow after the consultation period (which includes fieldwork) 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/phprocess).

- The Committee will meet again to consider the consultation comments, the fieldwork reports 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: 22 May 2008
Second Committee meeting: 13 June 2008

Details of PHIAC membership are given in appendix A and key supporting documents used in the preparation of this document are listed in appendix E.

This guidance was developed using the NICE public health intervention process.

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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 these interventions. The recommendations are preliminary and may change after consultation.

The evidence statements underpinning the recommendations are listed in appendix C. A definition of people who are disadvantaged is given below, along with a definition of disadvantaged areas and a brief description of the interventions covered, immediately before the list of recommendations.

The evidence reviews, supporting evidence statements and economic analysis are available on the Institute's website at www.nice.org.uk/350206

Definitions

Individuals who are disadvantaged include:

- people on a low income
- lone parents and low-income families
- people on benefits and living in public housing
- individuals with mental health problems
- people with a learning disability
- people who are institutionalised, including those serving a custodial sentence
- members of some black and minority ethnic groups
- people who are homeless
- people who are destitute.

Local agencies (such as local authorities and primary care trusts [PCTs]) define disadvantaged areas in a variety of ways. For instance, they may use the Index of Multiple Deprivation 2007 (ID 2007) which combines indicators on economic, social and housing issues to produce a single deprivation score.

(This index can also be used to rank different areas of England relative to one another, according to their level of deprivation.)

Generally, local authority areas are deemed to be disadvantaged if they fall in the bottom fifth nationally for three out of five of the following indicators:

- Male life expectancy at birth.
- Female life expectancy at birth.
- Cancer mortality rate in under 75s.
- Cardiovascular disease in under 75s.
- Index of Multiple Deprivation 2004 (local authority summary) average score.

Smoking cessation and statins

The recommendations have been developed in relation to smoking cessation services and the provision of statins, as defined in existing NICE guidance. These two topics were used because:

- Methods of identifying and supporting people and improving their access to services need to be assessed using interventions which have already been established as effective and cost effective. Smoking cessation services and the use of statins are generally agreed to be effective interventions.

- Epidemiological data show a clear socioeconomic gradient for smoking and CVD. Tackling these areas would be expected to make a significant contribution to the government's strategy for reducing health inequalities.

If someone has a 20% or higher risk of a first cardiovascular event in the next 10 years they are deemed at high risk of cardiovascular disease (CVD), according to NICE guidance.

Eligibility criteria for statins is detailed in 'Lipid modification: cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease' (NICE clinical guideline due May 2008).

Tackling health inequalities

Health inequalities are so deeply entrenched that providing disadvantaged groups or areas with better services – and better access to those services – can only be one element of a broader strategy that includes initiatives to address the distribution of the wider determinants of health. In both cases, local and national activities need to be developed and sustained on a long-term basis.

Implementation of the recommendations will require:

- An infrastructure and resources so that service providers can:
    - actively identify people who are disadvantaged and at risk of premature death
    - ensure services are accessible to them
    - ensure they complete treatment.
- Policy initiatives which prioritise health inequalities and ensure action to tackle them are included in PCT plans and local area agreements.

Recommendation 1: finding clients

Who is the target population?

Adults who are disadvantaged:

- who smoke
- who are at high risk of CVD due to other factors
- who are eligible for statins.

Who should take action?

Service providers and commissioners (for example, general practices, primary care trusts [PCTs], community services, local authorities and others with a remit for tackling health inequalities).

What action should they take?

- Primary care professionals should use a range of methods to identify clients including:
    - the use of primary care and general practice registers (for example, to identify people who smoke or who are from particular minority ethnic groups)
    - opportunistic identification during primary care appointments (for example, during routine visits, prenatal appointments and screening for other conditions such as sexually transmitted infections)
    - cold-calling in pre-identified areas or with specific populations (for example by direct mail, mobile phones and random-digit dialling)
    - offering prevention advice to the families of patients who have premature coronary heart disease (CHD)
    - analyses of quality outcomes framework (QOF) data.

- Those working with communities should use a range of methods to identify clients including:
    - opportunistic identification (for example, using lifestyle factors such as smoking or other indicators such as blood pressure) during health sessions held at a range of community and public sites. These could include post offices, charity shops, supermarkets, homeless centres, workplaces, prisons and long-stay psychiatric institutions
    - running culturally sensitive educational sessions which include a CVD risk assessment and take place in black and minority ethnic community settings (including places of worship)
    - using community health workers (including health trainers) and outreach activities.

- Monitor these methods and adjust them according to local needs.

Recommendation 2: improving services and retaining people

Who is the target population?

Adults who are disadvantaged:

- who smoke
- who are at high risk of CVD due to other factors
- who are eligible for statins.

Who should take action?

Service providers (for example, PCTs, general practices, community services, local authorities and others with a remit for tackling health inequalities).

What action should they take?

- Ensure services are sensitive to cultural and gender issues. For example, provide multi-lingual literature in a culturally-acceptable style and involve community, religious and lay groups. Where appropriate, offer translation and interpretation facilities. Promote services using culturally relevant local and national media as well as representatives of different ethnic groups.

- Provide services in places that are easily accessible to people who are disadvantaged (such as community pharmacies and shopping centres) and at times to suit them.

- Provide support to ensure they can attend appointments (for example, this may include help with transport, postal prompts and offering home visits).

- Encourage and support them to comply with treatment (for example, by using self-management techniques based on an individual assessment and involving problem solving, goal setting and follow-up.) (For recommendations on the principles of behaviour change, see ‘Behaviour change at population, community and individual levels’ [NICE public health guidance 6].)

- Provide flexible services that meet the level of need and understanding of individuals who are disadvantaged. For example, this includes providing drop-in or rolling, community-based services, proactive outreach work, out of hours services, workplace services and single-sex sessions.

- Offer proactive support. This could include helplines, brochures and invitations to attend services. It could also include providing GPs with postal prompts to remind them to monitor people who are disadvantaged and who have had an acute coronary event.

- Develop and deliver client-centred, non-judgemental programmes (using, for example, social marketing techniques) to tackle social and psychological barriers to change.

- Address factors that prevent people from using the services (for example, they may have a fear of failure or of being judged, or they might not know what services and treatments are available).

- Support the development and implementation of regional and national strategies to tackle health inequalities by delivering proven local activities.

- Use health equity audits to determine how well services are reaching people who are disadvantaged (for example, by matching the postcodes of service users to deprivation indicators and smoking prevalence). In addition, seek feedback from the target populations on whether the services are accessible, appropriate and meeting their needs.

Recommendation 3: system incentives

Who is the target population?

Service providers (for example, PCTs, community services, local authorities and others with a remit for tackling health inequalities) and practice-based commissioning (PBC) groups.

Who should take action?

Policy makers, planners and commissioners.

What action should they take?

- Provide incentives for implementing strategies that improve proactive case finding, retention and access to services. The strategies should have clear and measurable objectives. The incentives may be positive (for example, performance bonuses) or negative (penalties if targets are not met).

- Support and sustain activities aimed at improving the health of people who are disadvantaged by:
    - using relevant indicators and ensuring target-setting and exception-reporting do not increase health inequalities
    - using local enhanced services to encourage the identification and continued support of those who are at risk of premature death from CVD and other smoking-related diseases
    - ensuring there are incentives for targeting people who are disadvantaged (for example, bonus payments).

- Provide incentives for local projects that improve the health of people who are disadvantaged, specifically, those who smoke or are at high risk of CVD from other causes or are eligible for statins. Ensure the projects are evaluated and, if effective, ensure they continue.

Recommendation 4: individual incentives

Who is the target population?

Adults who are disadvantaged:

- who smoke
- who are at high risk of CVD due to other factors
- who are eligible for statins.

Who should take action?

Service providers (for example, PCTs, general practices, community services, employers, local authorities and others with a remit for tackling health inequalities) and PBC groups.

What action should they take?

- Provide people who are disadvantaged with incentives to use services to prevent ill health and improve their health.

- Provide people who are disadvantaged with incentives to improve their health by changing their behaviour. For example, offer them incentives to complete a treatment programme. (For recommendations on the broader principles of behaviour change, see 'Behaviour change at population, community and individual levels' [NICE public health guidance 6].)

Recommendation 5: partnership working

Who is the target population?

Adults who are disadvantaged:

- who smoke
- who are at high risk of CVD due to other factors
- who are eligible for statins.

Who should take action?

Planners, commissioners and service providers with a remit for tackling health inequalities. These include PCTs, general practices, community services, PBC groups, local strategic partnerships, local authorities (including education and social services), the criminal justice system and members of the voluntary and business sectors.

What action should they take?

- Develop and sustain partnerships with professionals and community activists who are in contact with people who are disadvantaged. (For

recommendations on community engagement see ‘Community engagement to improve health’ [NICE public health guidance 9].)

- Establish links between practices and the community to identify how best to provide resources to improve the lifestyle of adults who are disadvantaged, specifically those who smoke, or who are at high risk of CVD from other causes or who are eligible for statins. For example, support delivery of health initiatives as part of local neighbourhood renewal strategies.

- Develop and maintain a database of local initiatives that aim to reduce health inequalities by improving the health of people who are disadvantaged.

- Develop and sustain local and national networks for sharing local experiences. Ensure mechanisms are in place to evaluate and learn from these activities on a continuing, systematic basis.

Recommendation 6: training and capacity

Who is the target population?

Service providers (for example, PCTs, general practices, local authorities and others with a remit for tackling health inequalities).

Who should take action?

Commissioners and service providers (for example, PCTs, community services, local authorities and others with a remit for tackling health inequalities).

What action should they take?

- Ensure practitioners have the necessary skills to help prevent ill health among people who are disadvantaged and ensure there are enough of them to meet local need. (For examples of the skills needed see: ‘Brief interventions and referral for smoking cessation in primary care and other settings’ [NICE public health guidance 1]; ‘Workplace health promotion: how to help employees to stop smoking’ [NICE public health guidance 5];

'Smoking cessation services in primary care, pharmacies, local authorities and workplaces, particularly for manual working groups, pregnant women and hard to reach communities' [NICE public health guidance 10]; and 'Standard for training in smoking cessation treatments' [www.nice.org.uk/502591] or updated versions of this.)

- Ensure practitioners have the skills to identify and monitor people who are disadvantaged and can tailor interventions to meet their needs. (For examples of the skills needed see: 'Community engagement to improve health' [NICE public health guidance 9]; 'Behaviour change at population, community and individual levels' [NICE public health guidance 6]; 'Brief interventions and referral for smoking cessation in primary care and other settings' [NICE public health guidance 1]; 'Smoking cessation services in primary care, pharmacies, local authorities and workplaces, particularly for manual working groups, pregnant women and hard to reach communities' [NICE public health guidance 10]; and 'Statins for the prevention of cardiovascular events' [NICE technology appraisal 94].)

- Ensure service providers and practitioners are capable of making services highly responsive to the needs of disadvantaged individuals and ensure there are enough of them to meet local need. For example, they should be able to compare service provision with need, access, use and outcome using health equity audits. (For examples of the training and skills needed, refer to national organisations such as the Faculty of Public Health, British Psychological Society, Skills for Health and the Institute of Environmental Health).

2 Public health need and practice

Despite increased prosperity and reductions in mortality among some population groups, CVD, other smoking-related diseases and smoking are still more prevalent among lower socioeconomic and certain ethnic groups compared with the general population.

Since 1995–97, circulatory diseases have become more prevalent, in relative terms, among these groups. For example, between 2004 and 2006, 44 more people per 100,000 (aged under 75) died from circulatory disease in the most deprived fifth of local authority districts than in the least deprived areas. In relative terms, this means the death rate from circulatory disease was 71% higher in the most deprived areas compared with the least deprived areas (DH 2008).

Since 1998 there has been no significant change in smoking prevalence among adults in manual groups compared to non-manual groups in absolute terms (and some signs of a widening in the gap in relative terms). In 2006 in Britain, smoking prevalence was twice as high among unskilled workers than among professionals (33% and 16% respectively among routine-and-manual and managerial-and-professional groups respectively [Office for National Statistics 2007]).

The highest premature death rates are found among those who experience disadvantage both in childhood and as adults (Graham and Power 2004). People who enjoy a lifetime of advantage are likely to live longer, healthier lives than those who experience disadvantage (Graham and Power 2004; Kawachi and Kennedy 1997; Wilkinson 1996.

Factors linked to health inequalities

It is widely recognised that factors such as poor living conditions, lower educational achievement and behaviours which damage health (such as smoking) lead to a greater than average risk of premature death, greater morbidity and lower life expectancy (Graham and Power 2004; Kawachi and Kennedy 1997; Wilkinson 1996). It is also generally acknowledged that people in lower socioeconomic groups are more likely to adopt behaviours that may damage their health.

As a result, there is a steep social class gradient for many different conditions that affect health (DH 2008). For example, the death rate from coronary heart disease (CHD) is three times higher among unskilled workers than among

professionals. Similarly, deaths from lung cancer are four times higher among unskilled male manual workers of working age than among professional men (reflecting the fact that smoking is much more common among male manual workers than their professional counterparts) (Twigg et al. 2004).

Tackling health inequalities

Government policy encourages PCTs, local authorities and others to identify and target groups and neighbourhoods where health – and the use of health services – is worst.

Reducing health inequalities is a continuing government priority, as confirmed in the recent comprehensive spending review (HM Government 2007), the operating framework for the NHS in 2008/09 (DH 2007a), and planning guidance for the NHS for the three years until 2011 (DH 2008).

More specifically, the government has reaffirmed existing commitments to reduce by 2010 the social class gap in infant mortality and the life expectancy gap (including mortalities from CVD and cancer) between the most deprived areas (defined as the Spearhead Group of local authority and primary care trust areas) and the rest of the population. It has also reaffirmed its commitment to reduce smoking prevalence among 'routine' and manual groups (HM Government 2007). The cancer reform strategy (DH 2007b) makes reducing the social class differential in the prevalence of cancer a priority. It highlights action to prevent cancer, particularly by reducing smoking among the population.

From 2008, new statutory requirements arising from the Local Government and Public Involvement in Health Act 2007 will underpin local partnership working, particularly between local authorities and PCTs (UK Parliament 2007). For example, local authorities and PCTs must carry out a joint strategic needs assessment for their area and agree joint local area agreement (LAA) targets (Department for Communities and Local Government 2007). These new requirements will be a feature of national performance management and should create a more supportive environment for the NHS (for example, by

supporting the NHS strategy to reduce mortality and morbidity from cancer, CVD and other smoking-related diseases).

Challenges to preventing cancer and CVD

Helping people to stop smoking and the provision of statins are two of the most widely used interventions to prevent cancer and CVD. Both have been shown to be effective and cost effective generally – and both have considerable potential to reduce premature mortality rates among people who are disadvantaged (Raw et al. 2001; Ward et al. 2007). However, numerous factors prevent them from being fully effective including: the lack of available, appropriate and accessible primary care services; the reluctance of many people within vulnerable or at-risk communities to use health services; and poor compliance with treatment (DH 1999; Dixon 2000).

Finding effective ways of identifying at-risk or vulnerable groups, tailoring services to make them accessible and keeping people in the system ('client retention') are still key challenges. For example, simply improving services does not guarantee that they will be used by those most in need of them. Nor will it necessarily enhance people's compliance with any treatments they are offered.

3 Considerations

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

3.1 PHIAC considers a cross-government approach is required to tackle health inequalities and that high quality public services can make an important contribution. Although relatively narrow in scope, PHIAC considers that tackling smoking and CVD will make a significant contribution to reducing health inequalities.

3.2 The prevalence of diseases with a strong socioeconomic gradient may vary from one location to another. PHIAC recognises that people who are disadvantaged (specifically, those with a higher

than average risk of premature death from smoking-related diseases and CVD from other causes) are not necessarily located in areas defined as disadvantaged. The guidance, therefore, is applicable to these people – regardless of where they live.

3.3 PHIAC is mindful that a lack of resources (within the NHS and other sectors) has confounded attempts to address health inequalities. Adequate resources (financial, time, equipment and people) need to be deployed effectively to meet the needs of people who are disadvantaged.

3.4 People who are disadvantaged face social and economic issues that may adversely affect their ability to respond to the treatments or advice on offer.

3.5 Few, if any, studies in the effectiveness reviews focused primarily on reducing health inequalities. Studies that did include relevant variables were not powered to analyse outcomes in relation to different subgroups. As a result, it's unclear from these studies which methods are most effective at reaching people or groups that are disadvantaged. Smoking cessation and the provision of statins (both generally agreed to be effective interventions) provide clear pointers on how to meet the needs of people who are disadvantaged. They also form a key part of the government's approach to tackling health inequalities.

3.6 PHIAC would like to encourage research trials that are powered to assess the impact of different diseases and behaviours on different subgroups. This is especially important where the topic is known to have a clear socioeconomic gradient or affects some ethnic groups more than others (for example, smoking and heart disease).

3.7 Given the paucity of evidence on how to identify and support people who are disadvantaged, PHIAC felt it was important not to be prescriptive but to encourage innovation. It believes local people

and services should be given the support they need to develop a range of approaches to tackling health inequalities. New approaches must be evaluated to build the evidence base on how best to reach, engage and improve the health of people who are disadvantaged.

3.8 On average, smoking cessation interventions are cost effective, irrespective of the target audience or the method used to 'recruit' people. Similarly, it is cost effective to prescribe statins to anyone (where appropriate). Generally, however, targeting people who are disadvantaged is more costly than targeting the general population.

3.9 There is sometimes a mismatch between policy direction and service targets. For instance, the targets for NHS Stop Smoking Services do not focus on the most hard to reach groups, despite the thrust of stated policy.

3.10 PHIAC stressed that the quality and outcomes framework (QOF) needs to be modified to give GPs a greater incentive to find and treat those who are disadvantaged and at greatest risk of premature death from preventable conditions. GPs could play an important role in tackling such health inequalities and PHIAC considers that financial incentives would increase the likelihood that this would happen.

3.11 The mapping review identified a wide range of activities aimed at both people who are disadvantaged and at disadvantaged areas. These activities appear to operate like separate 'cottage industries'. It is important to find ways to include these activities in mainstream services so that they are not treated as additional activities or exceptions to the general rule.

3.12 PHIAC considers that evaluation (including evaluation of the impact of services on different subgroups) should be an integral part of new policies and services.

3.13 The recommendations made in this guidance aim to support and complement other initiatives to reduce premature mortality. These include the UK national screening committee's handbook on how to assess, reduce and manage the risk of vascular disease (www.library.nhs.uk/HealthManagement/ViewResource.aspx?resID=282009) and the Risk Assessment Management Programme for those aged between 40 and 74 (www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_083822.)

This section will be completed for the final guidance document.

4 Implementation

NICE guidance can help:

- NHS organisations meet DH standards for public health as set out in the seventh domain of 'Standards for better health' (updated in 2006). Performance against these standards is assessed by the Healthcare Commission, and forms part of the annual health check score awarded to local healthcare organisations.

- NHS organisations, social care and children's services meet the requirements of the DH's 'Operating framework for 2008/09' and 'Operational plans 2008/09–2010/11'.

- NHS organisations, social care and children's services meet the requirements of the Department of Communities and Local Government's 'The new performance framework for local authorities and local authority partnerships'.

- National and local organisations within the public sector meet government indicators and targets to improve health and reduce health inequalities.

- Local authorities fulfil their remit to promote the economic, social and environmental wellbeing of communities.

- Local NHS organisations, local authorities and other local public sector partners benefit from any identified cost savings, disinvestment opportunities or opportunities for re-directing resources.

- Provide a focus for children's trusts, health and wellbeing partnerships and other multi-sector partnerships working on health within a local strategic partnership.

NICE will develop tools to help organisations implement this guidance. Details of the tools will be available on our website after the guidance has issued (www.nice.org.uk/PHxxx).

5 Recommendations for research

This section will be completed in the final guidance document.

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

6 Updating the recommendations

This section will be completed in the final guidance document.

7 Related NICE guidance

Much of NICE guidance, both published and in development, is concerned with tackling heart disease, stroke, cancer – all conditions linked to premature mortality among disadvantaged groups. For details go to: www.nice.org.uk/guidance/

Those which are particularly relevant to this guidance are as follows:

Published

Community engagement to improve health. NICE public health guidance 9 (2008). Available from: www.nice.org.uk/PH009

Smoking cessation services in primary care, pharmacies, local authorities and workplaces, particularly for manual working groups, pregnant women and hard to reach communities. NICE public health guidance 10 (2008). Available from: www.nice.org.uk/PH010

Behaviour change at population, community and individual levels. NICE public health guidance 6 (2007). Available from: www.nice.org.uk/PH006

Workplace health promotion: how to help employees to stop smoking. NICE public health guidance 5 (2007). Available from: www.nice.org.uk/PHI005

Brief interventions and referral for smoking cessation in primary care and other settings. NICE public health guidance 1 (2006). Available from: www.nice.org.uk/PHI001

Statins for the prevention of cardiovascular events. NICE technology appraisal 94 (2006). Available from: www.nice.org.uk/TA094

Unpublished

Lipid modification: cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease (due May 2008).

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

Public Health Interventions Advisory Committee (PHIAC)

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.

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

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Professor Michael Bury Emeritus Professor of Sociology, University of London. Honorary Professor of Sociology, University of Kent

Professor Simon Capewell Chair of Clinical Epidemiology, University of Liverpool

Professor K K Cheng Professor of Epidemiology, University of Birmingham

Ms Jo Cooke Director, Trent Research and Development Support Unit, School for Health and Related Research, University of Sheffield

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, 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 Alasdair J Hogarth Head Teacher, Archbishops School, Canterbury

Mr Andrew Hopkin Assistant Director, Local Environment, Derby City Council

Dr Ann Hoskins Deputy Regional Director of Public Health/Medical Director, NHS North West

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

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Ms Sharon McAteer Public Health Development Manager, Halton and St Helens PCT

Mr David McDaid Research Fellow, Department of Health and Social Care, London School of Economics and Political Science

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. Tutor and Registered Breastfeeding Supporter, The Breastfeeding Network

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

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External contractors

External reviewers: reviews of effectiveness

Review 1: 'The effectiveness of smoking cessation interventions to reduce the rates of premature death in disadvantaged areas through proactive case finding, retention and access to services' was carried out by the Department of Social and Policy Sciences, University of Bath. The principal authors were: Linda Bauld, Lucy Hackshaw, Ann McNeill, Rachael Murray.

Review 2: 'The use of statins: proactive case finding, retention and improving access to services in disadvantaged areas' was carried out by the College of Medicine, University of Wales. The principal authors were: Hilary Kitcher, Mala Mann, Fiona Morgan, Helen Morgan, Lesley Sander, Ruth Turley, Alison Weightman.

External reviewers: mapping review

Mapping review: 'Guidance for the NHS and other sectors on interventions that reduce the rates of premature death in disadvantaged areas: proactive case finding and retention and improving access to services' was carried out by the School for Health, Durham University. The principal authors were: Jean Brown, David J Hunter, Helen Jennings-Peel, Linda Marks.

External reviewer: economic appraisal

Economic appraisal: ‘Rapid review of economic evidence of interventions to reduce the rate of premature death in the most disadvantaged populations’ was carried out by Matrix Consulting.

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

Introduction

The reports of the reviews and economic appraisal include full details of the methods used to select the evidence (including search strategies), assess its quality and summarise it.

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/350206

The guidance development process

The stages of the guidance development 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 (screened against inclusion criteria used in reviews)

9. Synopsis, full reviews, supplementary reviews and economic modelling submitted to PHIAC

10. PHIAC produces draft recommendations

11. Draft recommendations published on website for comment by stakeholders and for field testing

12. PHIAC amends recommendations

13. Responses to comments published on website

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. The two overarching questions focused on:

- the use of statins to combat CVD
- smoking cessation activities.

Statins

- What are the most effective and cost-effective methods of identifying and supporting people at increased risk of developing CVD, or who already have CVD?
    - What are the most effective and cost-effective methods of improving access to services, under what circumstances, for whom and when?
    - What type of support is most effective for different groups, under what circumstances and when?
    - Is there a trade-off between equity and efficiency?

Smoking cessation

- What are the most effective and cost-effective methods of identifying and supporting people aged 16 years and over who want to stop smoking, in particular, pregnant women, manual workers and those from disadvantaged backgrounds?
    - What are the most effective and cost-effective methods of improving access to services, under what circumstances, for whom and when?
    - What type of support is most effective for different groups, under what circumstances and when?
    - Is there a trade-off between equity and efficiency?

Reviewing the evidence of effectiveness

Two reviews of effectiveness were conducted.

Identifying the evidence

The following databases were searched (from 1995 to 2007):

- AMED (Allied and Complementary Medicine)
- ASSIA (Applied Social Science Index and Abstracts)
- British Nursing Index
- CINAHL (Cumulative Index of Nursing and Allied Health Literature)

- Cochrane Central Register of Controlled Trails
- Cochrane Database of Systematic Reviews (CDSR)
- Database of Abstracts of Reviews of Effectiveness (DARE)
- EMBASE
- EPPI Centre Databases
- HMIC (Health Management Information Consortium – comprises King's Fund and DH-Data databases)
- MEDLINE
- PsychINFO
- SIGLE (System for Information on Grey Literature in Europe)
- Social Policy and Practice
- Sociological Abstracts

Other relevant databases (including sources of grey literature) were also searched, along with references from included studies. The following websites were searched:

- Community Development Xchange www.cdx.org.uk/
- Department of Health coronary heart disease policy section www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Coronaryheartdisease/index.htm
- European directory of good practices to reduce health inequalities http://ec.europa.eu/health/ph_projects/2003/action3/action3_2003_15_en.htm
- NHS networks www.networks.nhs.uk/
- WHO Health Evidence Network www.euro.who.int/HEN

In addition, information was sought from experts.

Selection criteria

Studies of primary and secondary prevention activities were included in the effectiveness reviews if they aimed to:

- find and then support adults at increased risk of developing (or with established) CHD (note, the statins search included CVD)
- provide adults at increased risk of developing (or with established) CHD with support services – or improved access to those services (note, the statins search included CVD)
- find and help people who smoke (aged 16 years and over) to stop or reduce the habit
- provide people who smoke (aged 16 years and over) with smoking cessation services – or improve their access to those services.

Studies were excluded if the interventions:

- did not aim to reduce or eliminate premature deaths from CHD or other smoking-related causes
- tackled the wider determinants of health inequalities (for example, using macro-level policies to tackle poverty and economic disadvantage).

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

Study type

- Meta-analyses, systematic reviews of randomised controlled trials (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 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.

Summarising the evidence and making evidence statements

The review data was summarised in evidence tables (see full reviews).

The findings from the reviews 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.

Study of current practice

The mapping review aimed to identify and describe smoking cessation interventions and the provision of statins in disadvantaged areas and among disadvantaged individuals. It looked at:

- ways of reaching people who need this type of support (proactive case finding)
- how to encourage those people to keep in touch with services (retention)
- service accessibility.

Projects and interventions were identified via:

- telephone interviews
- documentary analysis
- questionnaires
- scanning of selected conference archives and databases (where these were available online).

Work was carried out in two phases over a 3-month period. In phase one, 54 semi-structured telephone interviews were carried out with a wide range of national and regional organisations to identify local contacts, interventions and approaches. Selected conference archives and project databases were also scanned. In phase two, interventions were identified through questionnaires completed by local stakeholders and by analysing local documents. Full details can be obtained from: www.nice.org.uk/350206

Economic appraisal

The economic appraisal consisted of a review of economic evaluations and four cost-effectiveness reports. The cost effectiveness reports covered:

- Statins: one report focused on disadvantaged people, the other looked at the general population. They focused on how to: identify people at risk, improve or increase their access to services, ensure people who require treatment stay in the system and adhere to the treatment protocol.

- Smoking cessation: one report focused on disadvantaged people, the other looked at the general population. They focused on how to: identify people at risk, improve or increase their access to services, ensure people who require treatment stay in the system and adhere to the treatment protocol.

Review of economic evaluations

The review was conducted using the databases listed for the effectiveness reviews and the following economic databases:

- Econlit
- Health Economic Evaluation Database (HEED)
- NHS Economic Evaluation Database (NHS EED).

A total of 5293 titles and abstracts were screened against the original inclusion criteria (see inclusion criteria for effectiveness reviews) and they were all eliminated. In response, the inclusion criteria were relaxed to include both general and disadvantaged populations. Following a second screening, copies of 16 studies were obtained. In the final review, six studies were

assessed for quality and used to extract data. All these studies related to smoking cessation.

The small number of studies involved and the difficulties involved in making direct comparisons across studies (for instance, due to lack of information on the base year used to estimate prices) meant that it was not possible to undertake a quantitative synthesis of the results.

Cost-effectiveness analysis

An economic model was constructed to incorporate data from the reviews of effectiveness and cost effectiveness. The approach was applied to all four cost effectiveness reports. The results are reported in:

- 'Economic analysis of interventions to improve the use of statins interventions in the general population.'
- 'Economic analysis of interventions to improve the use of statins in disadvantaged populations.'
- 'Economic analysis of interventions to improve the use of smoking cessation interventions in the general population.'
- 'Economic analysis of interventions to improve the use of smoking cessation interventions in disadvantaged populations.'

They are available on the NICE website at: www.nice.org.uk/350206

Fieldwork

This section will be completed in the final document.

How PHIAC formulated the recommendations

At its meetings in November 2007 and March 2008 PHIAC considered the evidence of effectiveness and cost effectiveness 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.

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

Appendix C: the evidence

This appendix lists evidence statements provided by two reviews and links them to the relevant recommendations (see appendix B for the key to study types and quality assessments). The evidence statements are presented here without references – these can be found in the full review (see appendix E for details). It also sets out a brief summary of findings from the economic appraisal.

The two reviews of effectiveness are:

- 'The effectiveness of smoking cessation interventions to reduce the rates of premature death in disadvantaged areas through proactive case finding, retention and access to services.'

- 'The use of statins: proactive case finding, retention and improving access to services in disadvantaged areas'.

Evidence statement **1SM** indicates that the linked statement is numbered **1** in the review 'The effectiveness of smoking cessation interventions to reduce the rates of premature death in disadvantaged areas through proactive case finding, retention and access to services'. Evidence statement **1ST** indicates that the linked statement is numbered **1** in the review 'The use of statins: proactive case finding, retention and improving access to services in disadvantaged areas'.**MR** is used to indicate that supporting evidence on current practice can be found in the mapping review.

As noted in appendix B, study quality provides an overall indication of how well a study was conducted to minimise the likelihood of bias. For example, a quality rating of '++' indicates minimal likelihood of bias, whereas a rating of '-' indicates a significant likelihood of bias. Some of the studies that informed the evidence statements below were rated '-', due to poor methodology. However, this quality rating does not always apply to the way the studies actually identified, supported and improved individuals' access to services – the areas under investigation for this guidance.

The reviews and economic appraisal are available on the NICE website (www.nice.org.uk/50206). 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) below.

Where PHIAC has considered other evidence, it is linked to the appropriate recommendation below. It is also listed in the additional evidence section of this appendix.

Recommendation 1: evidence statements 1SM, 2SM, 6SM, 10SM, 13SM, 1ST, 2ST, 5ST, 7ST, 9ST, 10ST, 11ST, 12ST; MR

Recommendation 2: evidence statements 2SM, 3SM, 4SM, 5SM, 6SM, 7SM, 10SM, 11SM, 13SM, 14SM, 3ST, 4ST, 12ST, 13ST, 14ST, 15ST, 16ST, 18ST, 19ST, 20ST, 22ST, 23ST, 24ST; MR

Recommendation 3: evidence statement 1SM; MR

Recommendation 4: evidence statement 12SM

Recommendation 5: evidence statements 4SM, 6SM, 13SM, 14SM, 4ST, 11ST, 12ST, 13ST, 19ST, 20ST, 22ST; MR

Recommendation 6: evidence statements 8SM, 9SM, 14SM, 4ST; MR; IDE

Evidence statements

Evidence statement 1SM

Evidence from one UK observational study (++) suggests that the QOF component of the 2004 GP contract may have continued, rather than reversed, differences in the quality of care delivered between primary care practices in deprived and less deprived areas.

Evidence from another UK observational study (++) suggests that the new GP contract has resulted in an improvement in the recording of smoking status and the recording of the delivery of brief cessation advice in primary care, but not the prescribing of smoking cessation medication.

As these studies took place within UK primary care, they are directly relevant to the review.

Evidence statement 2SM

One cluster RCT in the UK (++) found that proactively identifying smokers through primary care records was feasible, and providing these smokers with brief advice and referral to NHS Stop Smoking Services increased contact with services and quit attempts but did not increase rates of cessation.

One observational study (-), one descriptive study (-), one cluster-controlled trial (+) and one RCT (+) conducted in the USA demonstrate that proactively identifying smokers in a number of ways, for example, through primary care, using a screening tool, or through cold calling, is possible and that these provide effective ways of recruiting smokers to cessation interventions. One observational study in Sweden (+) demonstrates that direct mailing to smoking mothers can be successful in increasing both participation in smoking cessation programmes and quit rates. One study took place within English primary care and it is directly applicable to the review. The remainder took place in the USA and may have limited applicability. Only one (American) study focused upon disadvantaged individuals and therefore the applicability of this evidence to target populations for this review may be limited.

Evidence statement 3SM

Two observational studies (both [++]) demonstrate that the NHS Stop Smoking Services have been effective in reaching smokers living in disadvantaged areas of England. As both took place in England and are focused on disadvantaged individuals, they are directly applicable to the review.

Evidence statement 4SM

Two studies provide evidence to suggest that barriers such as fear of being judged, fear of failure and lack of knowledge need to be tackled in order to motivate smokers from lower socioeconomic groups to access cessation services. Interventions need to be multi-dimensional in order to tackle social

and psychological barriers to quitting as well as dealing with the physiological addiction. (Two UK-based studies, one involving focus groups [++] and one involving interviews [++]). As both these studies took place with disadvantaged smokers in the UK, they are directly relevant to this review.

Evidence statement 5SM

Evidence from four studies suggests that social marketing has a role to play in delivering client-centred approaches to smoking cessation to disadvantaged individuals. (One UK-based observational study [-], one international RCT [+], one international population-based study [+] and one international controlled-before-and-after study [-]). One of these studies took place with disadvantaged smokers in the UK and is directly relevant to the review. Three took place in the USA and may have limited applicability to this review.

Evidence statement 6SM

One UK-based (+) study suggests that including lay people or community members as advisers may form an important part of a successful smoking cessation intervention targeted at a specific group, in particular, if the service is tailored to their specific needs and allows them to explore smoking in the context of relevant issues in their lives. This study took place with smokers in the UK and is relevant to this review.

Evidence statement 7SM

Two American studies suggest the need to test existing cessation interventions to determine their suitability for the specific group, to receive feedback from that group and to make amendments to any aspects that are unsuitable. In order for the client group to benefit, the intervention must fit their level of need and understanding, and be suitably accessible. (One USA-based RCT [++], and one USA-based cohort study [-]).

Evidence statement 8SM

There is evidence from a number of studies that training pharmacists to deliver smoking cessation interventions is important and that pharmacies may be a valuable means of reaching disadvantaged individuals and increasing

their smoking cessation rates (one UK systematic review comprising two RCTs and three non-randomised experimental studies [++], one UK observational study with interviews [++] and one international pilot study [+]). Two studies took place within the UK and are directly applicable to the review. One took place in the USA and so may have limited applicability to this review.

Evidence statement 9SM

There is evidence from three reviews that training dental professionals to deliver smoking cessation interventions is important, and that this setting has the potential to reach large numbers of smokers and increase cessation rates (one international systematic review comprising six RCTs [-], one UK review of mixed-study designs [-] and one international review of seven RCTs [+]). One study took place within the UK and is directly applicable to the review. Two studies took place in the USA and so may have limited applicability to this review. There is limited reference to disadvantaged individuals in any of the reviews and therefore the applicability of this evidence to target populations for this review may be limited.

Evidence Statement 10SM

Three studies provide some evidence of the potential benefit of drop-in or rolling, community-based sessions to reach smokers and increase cessation rates: two UK-based studies involving face-to-face interviews (both [-]) and one UK-based observational study (-). All studies took place within the UK and are directly applicable to the review.

Evidence Statement 11SM

One cohort study (+) provides evidence of the potential benefits of locating smoking cessation services in the workplace of manual groups to increase cessation rates. This study took place in the USA and so may have limited applicability to this review but does have potential implications for the UK population.

Evidence Statement 12SM

An international review (+) of 17 studies of population-based smoking cessation interventions that used a range of incentives found that larger incentives were more effective both in improving recruitment and cessation. The review included studies of mixed designs, and did not discuss the socioeconomic characteristics of participants. A UK cohort study (+) found some evidence for proactively targeting the provision of NRT to patients by GPs in a deprived area. This had a positive impact on quit rates and reductions in cigarette consumption. Two US cohort studies (both [+]) of free NRT for helpline callers provided evidence of an impact on calls, and some evidence in one study of greater quit rates. One US RCT (+) of workplace smoking cessation programmes and incentives found that the latter increased participation but not cessation. One study took place within the UK and is directly applicable to the review. Three studies took place in the USA and one review was based on studies conducted worldwide and so may have limited applicability to this review.

Evidence Statement 13SM

One RCT in the UK (++) with CHD patients randomised to nurse-run clinics or controls found little evidence of a change in smoking behaviour. Two RCTs in the UK (+) and (-) exploring smoking cessation interventions at routine cervical screening appointments found some evidence that brief interventions change the motivation or intention to quit smoking. One international RCT (+) examined the recruitment of women smokers attending a child's paediatric appointment into a smoking cessation intervention and found some evidence of an impact on quitting smoking. One international RCT (+) and one observational study using face-to-face interviews (+) investigated the use of cellular phones for smoking cessation in HIV-positive patients and showed a potential benefit for using this method of support. One US cohort study (+) provided preliminary evidence that offering a reduction programme could reach and influence more smokers than a programme just offering cessation. Three studies were carried out in the UK and are directly applicable to the target population, but they did not examine disadvantaged individuals

separately. Four studies were carried out in the US and so may have limited applicability to this review

Evidence Statement 14SM

Two UK surveys (one telephone [+] and one internet [+]) and one descriptive and audit survey (-) carried out in the UK provide evidence of pregnant smokers' perceptions of barriers to using smoking cessation support. Barriers include, among others: unsatisfactory information, lack of integration of cessation into routine antenatal care, lack of enthusiasm or empathy from health professionals and lack of short-term support. One RCT in the UK (+) of motivational interviewing with pregnant smokers and two international RCTs, one of a brief versus more intensive intervention (++) and one of proactive telephone support (-) provide little evidence of the effectiveness of these interventions. One US descriptive study (-) described the reach of a multifaceted pregnancy campaign but reported no outcomes. The UK studies are directly applicable to the target population, although only one of these focused on pregnant smokers in disadvantaged areas.

Evidence Statement 1ST

There is evidence from three case studies suggesting interventions inviting specific populations (South Asians, homeless people or patients with psychosis) to attend risk screening at their GP practice or primary care clinic may identify a number of people at risk of coronary heart disease (outcomes reported in two case studies [+], [-]). However, it is difficult to draw firm conclusions on how well such interventions are attended due to poor reporting of participation rates (outcomes reported in three case studies: two [+] and one [-]).

Evidence Statement 2ST

There is evidence from one small case study (+) that screening long-term psychiatric hospital patients can identify previously undetected CHD. Screening 64 patients identified one new case of established CHD and 22 previously undetected test abnormalities. Participation in the intervention was high (66%) but only a small proportion consented to having blood tests.

Evidence Statement 3ST

There is evidence from one RCT (+) that in an area of deprivation, postal prompts to patients and their GPs following an acute coronary event, improves monitoring of the patient's risk and the likelihood of the patient having at least one consultation with their GP or nurse.

Evidence Statement 4ST

There is evidence from one case study (+) to suggest that, in an area of deprivation, a project funding a nurse and exercise worker to develop practice nurse and GP skills in identifying and monitoring patients and facilitate the provision of exercise facilities for CHD patients, may lead to a small improvement in cholesterol testing of patients. 72.5% of control patients reported receiving cholesterol tests in the past year compared to 77.8% of the intervention group, p=0.002. No differences were seen in blood pressure measurement.

Evidence Statement 5ST

There is weak quality evidence from two case studies (both [-]) to suggest that offering cardiovascular risk assessment opportunistically to African-Caribbean general practice patients, or patients from a range of socioeconomic categories, may identify a number of people at risk of CHD. However, the interventions require further research using well-conducted studies before firm conclusions can be made.

Evidence Statement 7ST

There is evidence from three studies to suggest that workplace cardiovascular screening provided in schools or businesses in multi-ethnic, low-income areas (CBA [-], case study [-]), or for factory workers (case study [+]) is moderately well attended. Results suggest that a number of participants were identified for referral to a physician for follow-up (outcome reported in two studies: CBA [-], case study [-]). No firm conclusions can be made on patients' completion of follow-up as this was only reported in one poor quality study (case study [-]).

Evidence Statement 9ST

Evidence from one UK case study (-) evaluating the establishment of a health screening clinic in a prison indicated a moderate 35% voluntary uptake by the inmates. There were active interventions following the screening for 87 (34%) inmates and 13 (32%) staff screened. These ranged from simple anti-smoking and dietary advice to more formal medical interventions to manage raised blood pressure and cholesterol. Uptake data should be viewed cautiously, as the number of potential participants was not reported.

Evidence Statement 10ST

Two case studies suggest that offering blood pressure measurements at community sites in areas of deprivation can identify a number of people with elevated blood pressure. No firm conclusion can be made on participation rates as these were not reported in the studies. One UK case study (+) found 221 people out of 758 first-time users of self-reading sphygmomanometers placed in public sites had elevated blood pressure measurements. No firm conclusions can be made regarding physician follow-up as the researchers were unable to contact all of these people. One US RCT (+) providing blood pressure measurements at a range of community sites identified 31.4% with elevated blood pressure and 10.7% with severely elevated blood pressure. Transferability and cost-effectiveness of such interventions requires further study.

Evidence Statement 11ST

There is evidence from two case studies evaluating phase one (+) and phase two (-) of the Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) programme to suggest that adding cardiovascular screening to state breast and cervical cancer screening programmes reaches financially disadvantaged and minority ethnic women and identifies a number at risk of CHD. No conclusions can be made on participation rates or physician referrals as these outcomes have not been reported. Applicability and transferability of these programmes to a UK setting requires further study.

Evidence Statement 12ST

Evidence from three studies (two case studies [+] and one uncontrolled before- and-after study [+]) suggests that culturally-sensitive education sessions that include an element of cardiovascular risk assessment may be effective in the identification of at-risk individuals. Two moderate-quality studies evaluated educational interventions in black and minority community groups (+) and Turkish immigrants at a mosque (+) offering blood pressure measurements. Participation with blood pressure measurements were high, and revealed a number of patients with uncontrolled hypertension or with elevated blood pressure readings. Evidence from one case study (-) in which health checks were conducted before and after a church-based educational intervention with predominantly black participants should be viewed more cautiously owing to concerns of transferability and applicability.

Evidence Statement 13ST

Evidence from one qualitative study (++) of service users with severe mental illness (SMI), and primary care staff and community mental health teams, indicate a range of perceived obstacles to CHD screening. These include: lack of appropriate resources in existing services; anticipation of low uptake rates by patients with SMI; perceived difficulty in making lifestyle changes among people with SMI; patients dislike having blood tests; and lack of funding for CHD screening services or it not being seen as a priority by trust management. There was some disagreement about the best way to deliver appropriate care, and the authors concluded that increased risk of CHD associated with SMI and antipsychotic medications requires flexible solutions with clear lines of responsibility for assessing, communicating and managing CHD risks.

Evidence Statement 14ST

There is a paucity of good quality research on the effectiveness of pharmacist interventions to improve compliance with lipid-lowering therapy, particularly in disadvantaged individuals. Results from the four studies identified (two RCTs [-, -] one UCBA [uncontrolled before and after study] [-] and one observational

study [-]) should be viewed with caution owing to poor methodological quality and doubts about applicability to disadvantaged individuals.

Evidence Statement 15ST

Evidence from one low-quality RCT (-) suggests that telephone reminders and postcards to reinforce messages about coronary risk reduction does not produce significant improvements in short-term compliance in patients prescribed pravastatin treatment. Results should be viewed with caution as the poor quality study is likely to be highly biased and may not be applicable to disadvantaged individuals.

Evidence Statement 16ST

Well-conducted research examining patient education to improve compliance with lipid-lowering therapy is required before firm conclusions can be made regarding its effectiveness, particularly in disadvantaged individuals. Evidence from one uncontrolled before-and-after study (+) of nurse-led education in heart failure patients suggested there was no significant difference in self-reported compliance at one year. One RCT (-) of a pharmacy intervention including patient education for heart failure patients found a significant difference in compliance at 2 and 6 months, but not at 12 months. Applicability of the studies may be limited as the medication prescribed was not specified.

Evidence Statement 18ST

Well-conducted research is required examining the effectiveness of improving retention of patients at risk of or with CHD within services. Evidence from the one systematic review identified (+) highlights the dearth of literature reporting the evaluation of simple interventions aimed at improving adherence to cardiac rehabilitation for all patients or specific groups of patients. The systematic review identified few studies of sufficient quality to enable the recommendation of specific methods to improve adherence to outpatient cardiac rehabilitation. The most promising approach was the use of self-management techniques based around individualised assessment, problem solving, goal setting and follow up. This was most likely to be effective in improving specific aspects of rehabilitation, including diet and exercise.

Evidence Statement 19ST

Evidence from one systematic review (+) highlighted the need for trials of interventions applicable to all patients and targeting specific under-represented groups. The review revealed some evidence to support the use of approaches aimed at motivating patients, regular support and practice assistance from trained lay volunteers and a multifaceted approach for the coordination of transfer of care from hospital to general practice. Applicability and transferability of these programmes to disadvantaged populations requires further study.

Evidence Statement 20ST

Evidence from three studies indicated the importance of providing additional staff resources to encourage or support the uptake of services by people living in socially deprived areas. One US moderate-quality RCT (+) in a predominantly black population from a low income area found improved uptake of services with a tracking and outreach intervention, where community health workers supported patients in completing referral to their physician for high blood pressure. Evidence from one non-comparative UK case study (+) indicates that additional resources for tertiary cardiology may have reduced socioeconomic inequities in angiography without being specifically targeted at the needier, more deprived groups, but the impact on revascularisation equity is not yet clear. Evidence from one UK case study (-) suggested that a project funding one nurse and one exercise worker to support GP practices in a socially deprived area increased the practices' provision of cardiac rehabilitation services such as exercise programmes, psychological and social support and dietary advice. Project nurses worked directly with practice nurses and GPs to develop their skills in identifying and monitoring patients with CHD, giving lifestyle advice and ensuring optimum medication regimes. An exercise worker worked with practices and the community to identify and facilitate the provision of exercise resources suitable for CHD patients.

Evidence Statement 22ST

A number of barriers and enablers to accessing services were identified in five qualitative studies involving people from socially deprived areas ([++], [+, +, +] [-]). Common themes were a lack of understanding of services and treatments and the need for flexible services; the inconvenient timing of appointments and the lack of transport were both cited as barriers; with the latter overcome by the provision of home visits. Personal factors, such as the need to minimise the severity of their illness, taking a ‘cope and don’t fuss’ approach and fear of blame were also reported as barriers. The absence of cardiac rehabilitation services and long waiting lists was also noted and, for some patients, a reluctance to attend group care ([++], [+, +], [-]). Healthcare providers agreed on the need to expand cardiac rehabilitation services to reach out into communities and that the expansion would need to take place in the community (+).

Evidence Statement 23ST

A number of barriers and enablers to accessing services were identified in five qualitative studies involving Asian populations ([++], [+, +, +]) and African-Caribbean populations (+). Among Asian populations, a range of religious and cultural issues were identified including female inhibitions, religious practices, family commitments and influence and ‘inappropriate’ topics. The need for flexibility in the timing of services was highlighted and sensitivity in planning activities around religious events was viewed positively. Patients’ lack of understanding of services and treatment was suggested as a barrier to access, including low levels of education and misunderstanding of western medicine, and lack of knowledge on what services were available and how to apply. Communication and language barriers were also perceived. A ‘cope and don’t fuss’ approach among African-Caribbean hypertensive patients was a reported barrier to accessing services (+).

Evidence Statement 24ST

One qualitative study of cardiac rehabilitation coordinators in Scotland (+) found that age was widely perceived to influence access to services, both

during initial assessment and in assessments for exercise components. Focus groups revealed that staff appeared to have knowledge of the benefits for older people but that scarcity of resources prevented them offering more accessible and appropriate services.

Mapping review

Brown et al. (2007) Guidance for the NHS and other sectors on interventions that reduce the rates of premature death in disadvantaged areas: proactive case finding and retention and improving access to services [online]. Available from:

Cost-effectiveness evidence

Overall, interventions that help people from disadvantaged backgrounds to give up smoking (using a range of methods to identify and encourage them to complete the treatment) are very cost effective. The median cost per quality adjusted life year (QALY) (based on 13 studies of disadvantaged populations) was £1500 compared with a median cost of £600 for the general population (based on 36 studies). The difference per QALY between disadvantaged groups and the general population ranged from £300 to £1700 according to the cessation methods used.

Interventions that increase the number of people from disadvantaged backgrounds who take statins (and that ensure they continue to take statins for as long as needed) were very cost effective. They were estimated to cost £850, £900 and £2100 per QALY respectively, based on three separate studies (in addition to the cost of statins). However, they cost considerably more when screening was used, if there was a low probability of finding eligible people.

Appendix D: 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. These gaps are set out below.

1. Studies primarily focus on individuals with a specified condition or behaviour. There is little data on how to find those most at risk of developing such behaviours or conditions. Some studies target disadvantaged areas but they do not focus on those at greatest risk within those areas.

2. Most studies focus on small scale, local interventions that reflect local context and priorities (for example, drop-in centres for smoking cessation). There is a lack of evidence on the impact of such interventions delivered on a large-scale.

3. There is a lack of systematic evaluation of local interventions specifically designed to target those most at risk of a particular condition or behaviour.

4. There is a lack of data on interventions which primarily aim to retain people at risk of specific conditions within the health system, both generally and in relation to characteristics such as age, ethnicity, socioeconomic status and gender.

5. There is little evidence on whether addressing the barriers to service use results in more people using a service.

6. There is a lack of research on the impact that combined macro- and micro-level interventions can have on reducing health inequalities and the relative contribution that components at each level make.

7. Interventions that aim to find and treat those most at risk of premature death (and improve their access to services) have rarely been assessed in terms of effectiveness and cost effectiveness.

8. There is a lack of evidence on the incremental effectiveness and cost-effectiveness of adapting interventions to meet the needs disadvantaged individuals.

9. There is a paucity of evidence on the effectiveness of individual components of an intervention.

10. There is a paucity of UK evidence on the effectiveness of using incentives to increase the number of people who both use services and complete their treatment.

(**Source**: evidence reviews)

Appendix E: supporting documents

Supporting documents are available from the NICE website (www.nice.org.uk/350206). These include the following.

- Reviews of effectiveness:
  - Review 1: 'The effectiveness of smoking cessation interventions to reduce the rates of premature death in disadvantaged areas through proactive case finding, retention and access to services'.
  - Review 2: 'The use of statins: proactive case finding, retention and improving access to services in disadvantaged areas'..
- Mapping review: 'Guidance for the NHS and other sectors on interventions that reduce the rates of premature death in disadvantaged areas: proactive case finding and retention and improving access to services'.
- Economic appraisal: 'Rapid review of economic evidence of interventions to reduce the rate of premature death in the most disadvantaged populations'.

For information on how NICE public health guidance is developed, see:

- 'Methods for development of NICE public health guidance' available from: www.nice.org.uk/phmethods
- '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/phprocess