NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

PUBLIC HEALTH GUIDANCE

SCOPE

1 Guidance title

Prevention of cardiovascular disease at population level

1.1 Short title

Prevention of cardiovascular disease

2 Background

a) The National Institute for Health and Clinical Excellence ('NICE' or 'the Institute') has been asked by the Department of Health (DH) to develop guidance on a public health programme aimed at preventing cardiovascular disease (CVD) in different populations.

b) NICE public health programme guidance supports implementation of the preventive aspects of national service frameworks (NSFs) where a framework has been published. The statements in each NSF reflect the evidence that was used at the time the framework was prepared. The public health guidance published by the Institute after an NSF has been issued will have the effect of updating the framework. Specifically, in this case, the guidance will support NSFs on the following: cancer, coronary heart disease (including obesity), diabetes, and older adults (including stroke services) (DH 2000a; DH 2000b; DH 2001a; DH 2001b).

c) This guidance will support a number of related policy documents including:

- 'Commissioning framework for health and well-being' (DH 2007a)

- ‘Delivering choosing health: making healthier choices easier’ (DH 2005a)
- ‘Health challenge England – next steps for choosing health’ (DH 2006a)
- ‘Healthy weight, healthy lives: a cross-government strategy for England’ (DH 2008a)
- ‘National stroke strategy’ (DH 2007b)
- ‘Our health, our care, our say’ (DH 2006b)
- ‘Putting prevention first – vascular checks: risk assessment and management’ (DH 2008b)
- ‘Tackling health inequalities – a programme for action’ (DH 2003)
- ‘Tackling health inequalities: what works’ (DH 2005b)
- ‘Tackling health inequalities: 2007 status report on the programme for action’ (DH 2008c)
- ‘The NHS in England: the operating framework for 2006/7’ (DH 2006c)
- ‘The NHS in England: the operating framework for 2008/9’ (DH 2007c)
- ‘Wanless report: securing good health for the whole population’ (Wanless 2004).

d) This guidance will provide recommendations for good practice, based on the best available evidence of effectiveness, including cost effectiveness. It is aimed at professionals, commissioners and managers with public health as part of their remit working within the NHS, local authorities and the wider public, private, voluntary and community sectors. It may also be of interest to members of the public.

e) The guidance will complement and support NICE guidance on alcohol, CVD risk assessment, obesity, physical activity and smoking cessation. For further details, see section 6.

This guidance will be developed using the NICE public health programme process.

3 The need for guidance

a) A large number of preventable illnesses and deaths are associated with CVD (CVD includes coronary heart disease [CHD], heart failure, stroke and peripheral arterial disease). In 2005, there were 171,021 deaths from circulatory diseases in England, including 45,620 from CHD and 18,013 from stroke (ONS: personal communication cited in Allender et al. 2007). In that year, over 40% of deaths in the UK were caused by CVD. More than 4 million UK patients are currently affected and it costs the UK approximately £30 billion annually. A large proportion of the risk of a first heart attack (over 90%) comes from nine easily or potentially modifiable risk factors (Yusuf et al. 2004).

b) Despite recent improvements, UK death rates from CVD are relatively high compared with other developed countries (only Ireland and Finland have higher rates). There is also considerable variation within the UK itself – geographically, ethnically and socially. For instance, premature death rates from CVD are three times higher among lower socioeconomic groups than among more affluent groups. In addition, death rates from CVD are approximately 50% higher than average among South Asian groups (Allender et al. 2007). The higher incidence of circulatory disease is a major reason why people living in areas with the worst health and deprivation indicators (the Spearhead areas) have a lower life expectancy compared with those living elsewhere in England. For males, it accounts for 35% of this gap in life expectancy (70% of this is due to CHD), and among females it accounts for 30% of the gap (63% of this is due to CHD) (DH 2008c).

c) CVD is influenced by a variety of ‘upstream’ factors (such as access to a safe environment for physical activity and a person’s educational level) and 'downstream' behavioural issues (such as diet and smoking). The British Heart Foundation identifies nine key risk factors that can be modified: smoking/tobacco use, poor diet, insufficient physical activity, high blood pressure, obesity/overweight, diabetes, psychosocial stress (linked to people’s ability to influence the potentially stressful environments in which they live), high alcohol consumption and high blood cholesterol. Other factors, such as maternal nutrition and air pollution may also be linked to the disease (Allender et al. 2007). Changes in risk factors, such as reducing cholesterol or blood pressure levels, or quitting tobacco, can rapidly reduce the risk of developing CVD.

d) Evaluating complex changes between populations is problematic for a number of reasons, for example: it’s difficult to design studies which evaluate entire cities, regions or countries; control sites can become ‘contaminated’ (that is, if the intervention affects people living in the control area); unreasonable expectations about the speed of effect; and failure to address ‘upstream’ influences such as policy or manufacturing practices. Some population programmes have been accompanied by a substantial reduction in the rate of CVD deaths. However, the degree to which these are attributable to the programme is debatable.

4 The guidance

Public health guidance will be developed according to NICE processes and methods. For details see section 5.

This document is the scope. It defines exactly what this guidance will (and will not) examine, and what the guidance developers will consider. The scope is based on a referral from the DH (see appendix A).

4.1 Populations

4.1.1 Groups that will be covered

People of all ages living within certain geographical areas who may or may not have other characteristics in common (such as ethnic origin). Usually these areas will cover at least a region of a country (such as Merseyside) and could be urban or rural. In the UK, they will not be smaller than an area currently covered by a primary care trust.

4.1.2 Groups that will not be covered

Individuals who are clinically diagnosed as being at high risk of developing – or who have already been diagnosed with – CVD. However, as populations include people at different stages of disease, it will have some relevance for them. (Individuals at high risk of developing CVD are covered by other NICE guidance, see section 6.)

4.2 Activities/interventions

4.2.1 Activities/interventions that will be covered

a) Interventions that address two or more CVD risk factors (multiple risk factor approaches) among a given population using one or more of the following:

- education or behavioural change (including the use of mass media)
- fiscal change
- environmental change
- legislation.

b) Programmes that include a pharmacological element alongside a broader approach aimed at reducing two or more CVD risk factors (as indicated in 4.2.1a). These programmes will only be included when they involve prevention of the onset of CVD (primary prevention) and where data can be disaggregated to show the impact of non-pharmacological elements.

c) Natural experiments, such as changes in the diet of Eastern Europeans brought about by social change (where relevant evidence is available).

(The literature search will cover 1970 to the present day.)

4.2.2 Activities/interventions that will not be covered

a) Secondary prevention activities and those aimed only at people who are at high risk of developing CVD. (If an intervention covers both primary and secondary prevention, it will only be included if the primary component is sufficiently disaggregated and can be reported separately.)

b) Interventions which focus on screening for CVD risk factors (for example, cholesterol-level screening) and do not attempt to modify them.

4.3 Key questions and outcomes

Below are the overarching questions that will be addressed along with some of the outcomes that would be considered as evidence of effectiveness.

Question 1: Which multiple risk-factor interventions are effective and cost effective in preventing the onset of CVD within a given population (primary prevention)? How does effectiveness and cost effectiveness vary between different population groups?

Expected outcomes: Population changes in: rates or levels of CVD mortality or morbidity; the biochemical or physiological precursors of CVD; behaviour associated with the risk of developing CVD.

Question 2: What barriers and facilitators influence the effectiveness of multiple risk-factor programmes aimed at reducing CVD (or the risk factors associated with CVD) among a given population (including subgroups experiencing health inequalities, where the data allows)?

Expected outcomes: Qualitative information on the process, the barriers and facilitators related to effective implementation of a population-level prevention programme.

4.4 Status of this document

This is the final scope, incorporating comments from a 4-week consultation which included a stakeholder meeting on 1 May 2008.

5 Further information

The public health guidance development process and methods are described in 'Methods for development of NICE public health guidance' (NICE 2006) available at www.nice.org.uk/phmethods and 'The public health guidance development process: An overview for stakeholders, including public health practitioners, policy makers and the public' (NICE 2006) available at www.nice.org.uk/phprocess

6 Related NICE guidance

Published

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

Improving the nutrition of pregnant and breastfeeding mothers and children in low-income households. NICE public health guidance 11 (2008). Available from: www.nice.org.uk/PH011

Lipid modification: cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease. NICE clinical guideline 67 (2008). Available from: www.nice.org.uk/CG067

Promoting and creating built or natural environments that encourage and support physical activity. NICE public health guidance 8 (2008). Available from: www.nice.org.uk/PH008

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

Workplace health promotion: how to encourage employees to be physically active. NICE public health guidance 13 (2008). Available from: www.nice.org.uk/PH013

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

Four commonly used methods to increase physical activity: brief interventions in primary care, exercise referral schemes, pedometers and community-based exercise programmes for walking and cycling. NICE public health guidance 2 (2006). Available from: www.nice.org.uk/PHI002

Obesity: guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. NICE clinical guideline 43 (2006). Available from: www.nice.org.uk/CG043

Under development

Mass-media and point-of-sales measures to prevent the uptake of smoking by children and young people. NICE public health guidance (due July 2008).

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 (due September 2008).

Promoting physical activity, play and sport for pre-school and school-age children in family, pre-school, school and community settings. NICE public health guidance (due January 2009).

Prevention and early identification of alcohol-use disorders in adults and young people. NICE public health guidance (due March 2010).

Appendix A Referral from the Department of Health

The Department of Health asked the Institute to:

'Prepare public health programme guidance on the prevention of cardiovascular disease at the population level.'

Appendix B Potential considerations

It is anticipated that the Programme Development Group (PDG) will consider the following issues in relation to studies that will be examined while developing the guidance:

- The target audience, actions taken and by whom, context, frequency and duration.
- Whether it is based on an underlying theory or conceptual model.
- Whether it is effective and cost effective.
- Critical elements. For example, whether effectiveness and cost effectiveness varies according to:
    - the diversity of the population (for example, in terms of the user's age, gender or ethnicity)
    - the status of the person (or organisation) delivering it and the way it is delivered
    - its frequency, length and duration, where it takes place and whether it is transferable to other settings
    - its intensity.
- Any trade offs between equity and efficiency.
- Any factors that prevent – or support – effective implementation.
- Any adverse or unintended effects.
- Current practice.
- Availability and accessibility for different population groups.

Appendix C References

Allender S, Peto V, Scarborough P et al. (2007) Coronary heart disease statistics 2007 edition. London: British Heart Foundation.

Department of Health (2000a) The NHS cancer plan: a plan for investment, a plan for reform. London: Department of Health.

Department of Health (2000b) National service framework for coronary heart disease. London: Department of Health.

Department of Health (2001a) Modern standards and services models – diabetes: national service framework standards. London: Department of Health.

Department of Health (2001b) National service framework for older people. London: Department of Health.

Department of Health (2003) Tackling health inequalities: a programme for action. London: Department of Health.

Department of Health (2005a) Delivering choosing health: making healthier choices easier. London: Department of Health.

Department of Health (2005b) Tackling health inequalities: what works. London: Department of Health.

Department of Health (2006a) Health challenge England – next steps for choosing health. London: Department of Health.

Department of Health (2006b) Our health, our care, our say. London: Department of Health.

Department of Health (2006c) The NHS in England: the operating framework for 2006/7. London: Department of Health.

Department of Health (2007a) Commissioning framework for health and well-being. London: Department of Health.

Department of Health (2007b) National stroke strategy. London: Department of Health.

Department of Health (2007c) The NHS in England: the operating framework for 2008/9. London: Department of Health.

Department of Health (2008a) Healthy weight, healthy lives: a cross-government strategy for England. London: Department of Health.

Department of Health (2008b) Putting prevention first – vascular checks: risk assessment and management. London: Department of Health.

Department of Health (2008c) Tackling health inequalities: 2007 status report on the programme for action. London: Department of Health.

Wanless D (2004) Securing good health for the whole population. London: HM Treasury.

Yusuf S, Hawken S, Ôunpuu T et al. (2004) Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. The Lancet 364: 937–952.