

# PUBLIC HEALTH GUIDANCE

## SCOPE

### 1 Guidance title

Public information, sun protection resources and changes to the environment to prevent skin cancer: NHS and local authorities.

#### 1.1 *Short title*

Information, resources and environmental changes to prevent skin cancer.

### 2 Background

- a) The National Institute for Health and Clinical Excellence (NICE) has been asked by the Department of Health (DH) to develop guidance on public health interventions for the NHS and local authorities aimed at preventing skin cancer. Specifically, it has been asked to produce guidance on: the provision of information, physical changes to the environment and the supply of sun protection resources. This scope focuses on the supply of sun protection resources, physical changes to the environment and multi-component primary prevention activities. Information provision is covered in a separate scope (see [www.nice.org.uk/guidance/PHG/Wave18/4](http://www.nice.org.uk/guidance/PHG/Wave18/4)). One piece of guidance will be produced covering both scopes.
- b) NICE public health guidance supports the preventive aspects of relevant national service frameworks (NSFs), where they exist. If it is published after an NSF has been issued, the guidance effectively updates it.
- c) This guidance will support the following policy documents which refer to skin cancer:

- 'Cancer commissioning guidance' (DH 2009).
- 'Manual for cancer services 2008: skin measures' (Peer Review Team, National Cancer Action Team 2008).
- 'Cancer reform strategy' (DH 2007).
- 'The NHS cancer plan: a plan for investment, a plan for reform' (DH 2000).

It will also support the following policy documents:

- 'Choosing health – making healthy choices easier' (DH 2004).
- 'Operational plans 2008/09–2010/11' (DH 2008).
- 'PSA delivery agreement 18: promote better health and wellbeing for all' (HM Treasury 2007).
- 'Tackling health inequalities: a programme for action' (DH 2003).
- 'The new performance framework for local authorities and local authority partnerships: single set of national indicators' (Department for Communities and Local Government 2007).

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 and local authorities. Examples include: local authority planners, public health practitioners, pharmacists, GPs, school nurses, practice nurses and skin cancer specialists such as clinical nurse specialists (skin cancer), dermatologists and skin cancer surgeons. It will also be of interest to those working in the wider public, private, voluntary and community sectors, as well as members of the public.

- e) The guidance will complement NICE guidance on improving outcomes for people with skin tumours including melanoma; photodynamic therapy for non-melanoma skin tumours; and referral guidelines for suspected cancer. For further details, see section 6.

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

### **3 The need for guidance**

- a) Exposure to ultraviolet (UV) radiation is the leading cause of skin cancer. This can occur naturally via sunlight and artificially through the use of sun lamps and tanning beds. The risk of skin cancer can be reduced by, for example, opting to stay in the shade, wearing protective clothing, avoiding the sun during the middle of the day and using high sun protection factor products.
- b) There are two main types of skin cancer, non-melanoma and malignant melanoma:
- Non-melanoma skin cancer is the most common and is usually the easiest to treat. There are two main sorts: basal cell carcinoma and the more serious squamous cell carcinoma (if left untreated, squamous cell carcinoma can spread to other parts of the body and can be severely disfiguring). However, non-melanoma skin cancer is rarely fatal.
  - Malignant melanoma is the most serious type and causes the majority of skin cancer deaths.
- c) Non-melanoma skin cancer is the most common cancer in the UK and is estimated to account for around one third of all cancers detected. More than 67,000 cases were registered in 2006 (Office for National Statistics 2008). However, registration details are known to be incomplete and it is estimated that over 100,000 cases are diagnosed each year (Cancer Research UK 2008a). Research

has shown that basal cell carcinoma is rising among young people, especially in the 30–39 year age group (Bath-Hextall et al. 2007). In England, more than 8500 cases of malignant melanoma were diagnosed in 2006 (Office for National Statistics 2008). In 2007, it caused 2042 deaths in England (Office for National Statistics 2009). Since the 1970s, the incidence of malignant melanoma has more than tripled in the UK: among men it has increased from around 2.5 per 100,000 in 1975 to 13.2 in 2005; the rate among women has increased from 3.9 to 12.7 per 100,000 during the same period (Cancer Research UK 2009). Although morbidity rates are higher among women, more men die from malignant melanoma (Office for National Statistics 2006).

- d) A recent survey highlighted that 44% of Britons were unable to recognise key signs of skin cancer (for example, a mole that is getting larger or that has an irregular border or colour). Only 34% check their moles at least once a month and 25% never check them. The majority of respondents (85%) thought that skin cancer (non-melanoma and malignant melanoma) accounted for less than 10% of all cancers in the UK (the actual figure is around 33%) (British Association of Dermatologists 2008). In a 2003 survey, 80% of those questioned mentioned using sunscreen to reduce the risk of skin cancer, but less than half (44%) specifically mentioned using a sunscreen with a 15+ SPF (Office for National Statistics 2003).
- e) Several factors increase the risk of developing and dying of skin cancer, for example:
- Age and sex – the number of cases of malignant melanoma increases with age and is more common in women (Cancer Research UK 2006).

- Skin damage (sunburn) that occurs at any age is associated with an increased risk of developing skin cancer later in life (Elwood and Jopson 1997).
  - Ethnicity – although incidence rates are lower among people with darker skin, mortality rates are often higher because skin cancer is often diagnosed late.
  - Individual risk – skin type, number of moles, hair and eye colour, a history of lowered immunity or transplant and a family or personal history of skin cancer all affect the risk of melanoma (Cancer Research UK 2006).
  - Regional variation – London and the north of England have the lowest incidence, while the highest incidence is in the south-west of England (Office for National Statistics 2005).
  - Socioeconomic status –malignant melanoma is positively associated with affluence. People from deprived areas have a 60–70% lower incidence than their more affluent peers (Cancer Research UK 2006). However, people from more affluent areas are more likely to survive the condition (Cancer Research UK 2008b). Sunbed outlets are also particularly prevalent in areas of socioeconomic deprivation.
- f) In 2005, skin cancer in England was estimated to cost over £190 million. The NHS alone spent approximately £70 million on the condition (Morris et al. 2005).

## **4 The guidance**

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

This document 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**      *Who is the focus?*

### **4.1.1**      **Groups that will be covered**

Everyone and, where the evidence permits, specific population groups. The latter could include people within a certain age range or from a particular ethnic group or who are at a greater than average risk of developing skin cancer. (For details see appendix B.)

### **4.1.2**      **Groups that will not be covered**

None.

## **4.2**      *Activities*

### **4.2.1**      **Activities that will be covered**

- a) Interventions that prevent the first occurrence (primary prevention) of non-melanoma and malignant melanoma skin cancer attributable to natural UV exposure. Specifically:
- Changes to the built or natural environment. These could include providing shelters and other areas of shade in public spaces or school grounds, or planting trees or vegetation to form areas of natural shade in urban areas. They may also include changing the time of day that set outdoor activities (such as school break times) take place.
  - Providing sun protection resources, for example providing sunscreen or protective clothing for outdoor workers.
- b) Multi-component primary prevention interventions that combine one or more of the above and may also include the provision of information.
- c) Primary prevention activities that focus on information provision. This includes information provided via one or more of the following: one-to-one or group-based verbal advice, mass-media campaigns, and leaflets and other printed information such as posters and

teaching resources. It also includes new media such as the Internet (including social networking sites) and text messaging. **Please note, a scope for this aspect of the guidance has been produced separately and is available at [www.nice.org.uk/guidance/PHG/Wave18/4](http://www.nice.org.uk/guidance/PHG/Wave18/4) (also see appendix A).**

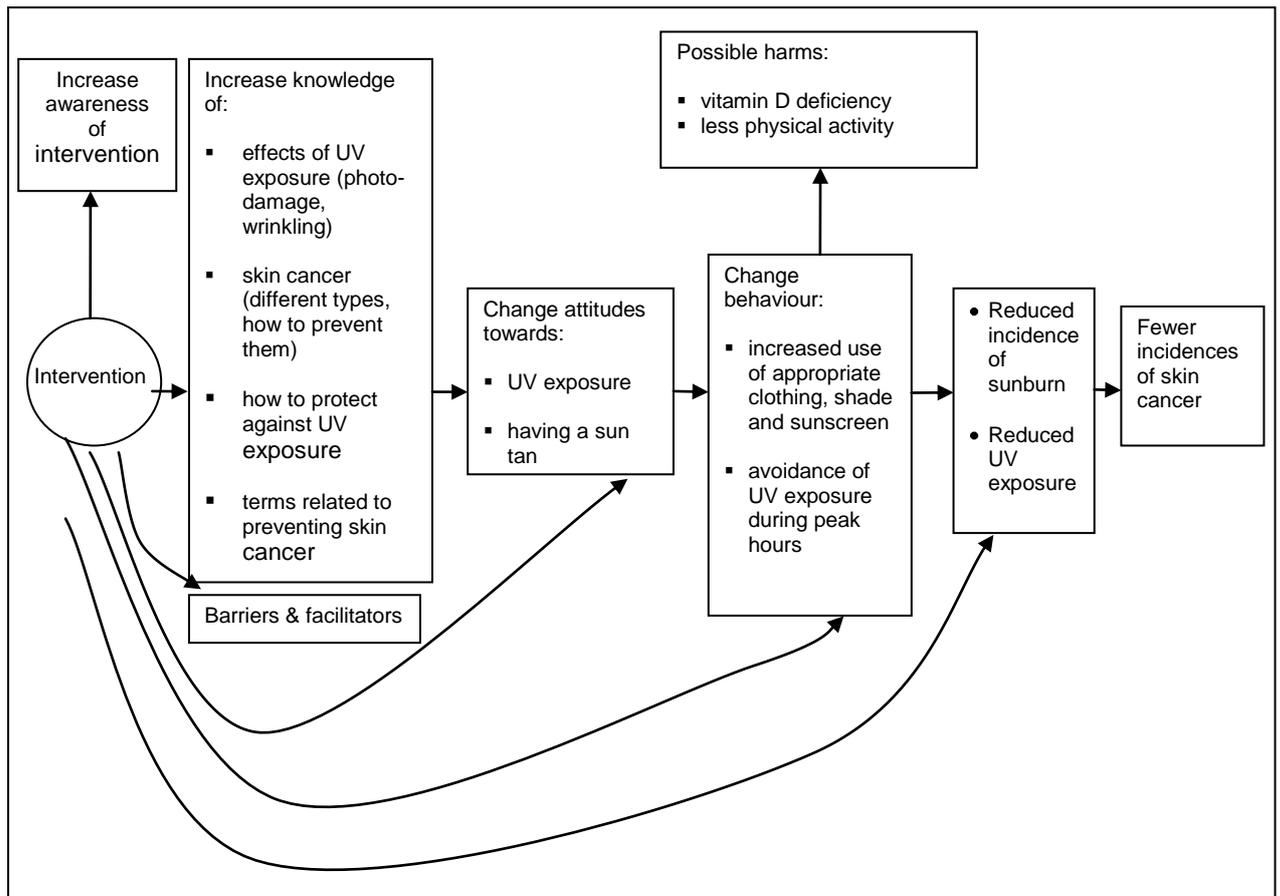
- d) Interventions targeted at particular vulnerable and high-risk groups of people (if the evidence permits).

These activities may take place in any setting (such as the NHS, schools and workplaces) and be carried out by a range of people (such as GPs, practice nurses, pharmacists, staff from early childhood services and teachers).

#### **4.2.1.1 Logic model**

- a) The model below sets out the conceptual links between skin cancer prevention interventions and short- and medium-term outcomes. For example, such interventions might lead to an increase in knowledge about how to protect against UV exposure. They might also lead to a change in attitudes about UV exposure or an increase in the number of people who protect themselves by wearing appropriate clothing and using shade and sunscreen. In the longer term, skin cancer prevention interventions may reduce the incidence of overexposure to UV radiation. This, in turn, may reduce the number of cases of non-melanoma and malignant melanoma skin cancer.

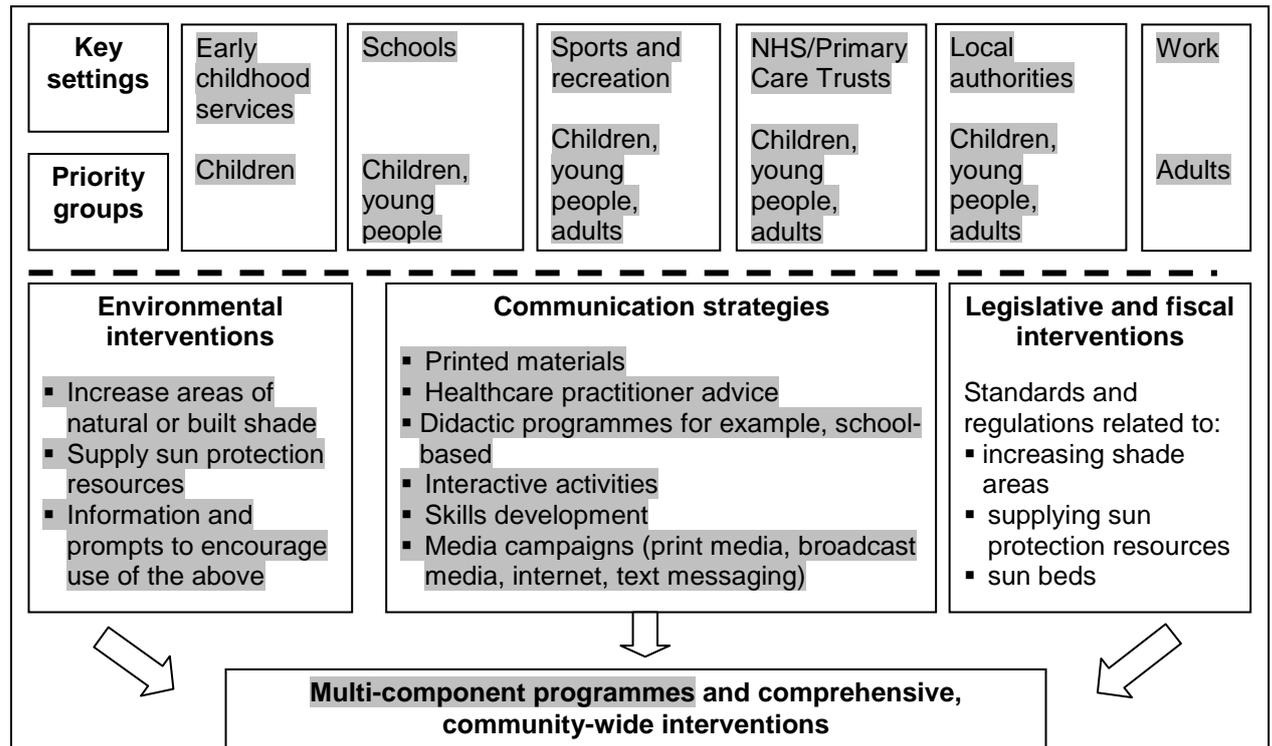
## Analytic framework for the primary prevention of skin cancer



[Adapted from: Saraiya et al. 2004]

- b) The diagram below outlines the various types of intervention that can be undertaken, and the various settings and population groups that will be covered. Activities highlighted include all those that could be covered by the guidance, including the provision of information. **(Please note: information provision has been covered in detail in a separate scope, see [www.nice.org.uk/guidance/PHG/Wave18/4](http://www.nice.org.uk/guidance/PHG/Wave18/4))**

## Interventions, populations and settings



### 4.2.1.2 Comparators

The interventions (see section 4.2.1) will be compared with 'doing nothing' or current practice. Where the data permit, the effectiveness and cost effectiveness of different types of interventions will be compared. For example, provision of sunscreen will be compared with the supplying and wearing of hats and other protective clothing. Similarly, information provision for children could be compared with supplying sun protection resources or providing them with areas of shade in school grounds.

### 4.2.1.4 Economic approach

A public sector perspective will be adopted when assessing the cost effectiveness of interventions to prevent the first occurrence of skin cancer attributable to UV exposure. However, if considered appropriate, results may also be presented from other perspectives. For example, an employer's perspective could be taken to show the business case for an intervention.

#### **4.2.2 Activities that will not be covered**

- a) Secondary prevention interventions (those aiming to prevent a re-occurrence of skin cancer).
- b) Policy, legislative or fiscal changes. For example, raising the minimum age of sunbed use to 18 years, removing unsupervised and coin-operated sunbed facilities or reducing VAT on sunscreen products.
- c) Local, regional or national skin cancer screening programmes which solely aim to detect the occurrence of skin cancer or activities to assess its incidence among specific groups of people.
- d) Clinical diagnosis, treatment and management of skin cancer.

#### **4.3 Key questions and outcomes**

Below are the overarching questions relating to sun protection resources, environmental changes and multi-component interventions that will be addressed. Also below are some of the outcomes that would be considered as evidence of effectiveness and cost effectiveness. The overarching questions and outcomes relating to information provision are presented in a separate scope.

**Question:** Which methods of supplying sun protection resources to prevent the first occurrence of skin cancer attributable to UV exposure are effective and cost effective? Which of these methods are most effective and cost effective?

**Question:** What physical changes to the natural or built environment are effective and cost effective at helping prevent the first occurrence of skin cancer attributable to UV exposure? Which of these changes are most effective and cost effective?

**Question:** What are the most effective and cost-effective multi-component interventions to change people's knowledge, awareness and behaviour and so prevent the first occurrence of skin cancer attributable to UV exposure?

Multi-component refers to interventions that combine one or more of the following: supply of sun protection resources, physical changes to the environment and information provision.

**Question:** What factors help or hinder the provision or use of the following to prevent the first occurrence of skin cancer attributable to UV exposure:

- sun protection resources
- physical changes to the natural or built environment (such as shelters and other areas of shade in public spaces or school grounds)
- multi-component interventions

**Expected outcomes:**

These may include:

- Reduction in the incidence of morbidity and mortality from non-melanoma and malignant melanoma skin cancer attributable to natural and artificial UV exposure. This may be measured in terms of a reduction in the incidence of sunburn or cumulative UV exposure.
- Change in behaviours that can lead to a reduction in exposure to natural and artificial UV.
- Increase in knowledge and change in attitudes that can lead to a reduction in exposure to natural and artificial UV.
- Increase in knowledge and awareness of the following:
  - causes of non-melanoma and malignant melanoma skin cancer attributable to natural and artificial UV exposure (such as sunburn)
  - risks associated with exposure to natural and artificial UV
  - ways to prevent non-melanoma and malignant melanoma skin cancer attributable to natural and artificial UV exposure. (For example, by wearing a hat in the sun, keeping in the shade, avoiding sunlight around the middle of the day, wearing protective clothing and using a 30+ protection sunscreen)

– where to get further advice and information.

- Views and experiences of those planning and delivering interventions on the factors that aid implementation, the barriers they face and how to overcome those barriers. Barriers might include the cost of sun protection resources or the cost of providing areas of shade.
- The public's views and experiences on what prevents people from using sun protection resources or taking advantage of shaded areas – and how to overcome those barriers. (For example, it might depend on when and how sun protection products are supplied and whether shaded areas are attractive and conveniently located).

#### **4.4 Status of this document**

This is the final scope, incorporating comments from a 4-week consultation.

## **5 Further information**

The public health guidance development process and methods are described in 'The NICE public health guidance development process: An overview for stakeholders including public health practitioners, policy makers and the public (second edition, 2009)' available at [www.nice.org.uk/phprocess](http://www.nice.org.uk/phprocess) and 'Methods for development of NICE public health guidance (second edition, 2009)' available at [www.nice.org.uk/phmethods](http://www.nice.org.uk/phmethods)

## **6 Related NICE guidance**

### ***Published***

Improving outcomes for people with skin tumours including melanoma. NICE cancer service guidance (2006). Available from:

[www.nice.org.uk/guidance/index.jsp?action=byID&o=10901](http://www.nice.org.uk/guidance/index.jsp?action=byID&o=10901)

Photodynamic therapy for non-melanoma skin tumours (including premalignant and primary non-metastatic skin lesions). NICE interventional procedure 155 (2006). Available from: [www.nice.org.uk/IPG155](http://www.nice.org.uk/IPG155)

Referral guidelines for suspected cancer. NICE clinical guideline 27 (2005).

Available from: [www.nice.org.uk/guidance/CG27](http://www.nice.org.uk/guidance/CG27)

### ***Under development***

Diagnosis and management of metastatic malignant disease of unknown primary origin. NICE clinical guideline (publication expected May 2010).

Temozolomide for the treatment of advanced an metastatic melanoma. NICE technology appraisal (publication date to be confirmed).

## Appendix A Referral from the Department of Health

The Department of Health asked the Institute:

'To produce public health intervention guidance for the NHS and local authorities on the prevention of skin cancer in the general public with specific reference to:

- provision of information
- physical changes to the environment
- supply of sun protection resources.'

This scope focuses on the supply of sun protection resources, physical changes to the environment and multi-component primary prevention activities. Information provision is covered in a separate scope (see [www.nice.org.uk/guidance/PHG/Wave18/4](http://www.nice.org.uk/guidance/PHG/Wave18/4)). One piece of guidance will be produced covering both scopes.

## Appendix B Potential considerations

It is anticipated that the Public Health Interventions Advisory Committee (PHIAC) will consider the following issues in developing the guidance:

- The target audience, for example, the health professionals or practitioners responsible for delivery and actions taken.
- Whether the intervention is based on an underlying theory or conceptual model.
- Whether the intervention targets specific individuals (for example, parents and young people) or targets the general population.
- Whether the intervention 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 person's age, gender, ethnicity, socioeconomic status, faith/religion, or individual risk factors such as history of lowered immunity or transplant, skin type or hair and eye colour, literacy levels or any physical and/or mental impairments) and whether the intervention is transferable to other population groups
  - the status, knowledge and influence of the person delivering the intervention
  - the way in which the intervention is delivered (for example, provision of signposts for shaded areas)
  - whether the target population is involved in the planning, design or delivery of the intervention
  - the relative effectiveness and cost effectiveness of the content of different interventions
  - the frequency, intensity and duration of the intervention

- where and when the intervention takes place (for example, at a school sports event or when people are on holiday abroad or during a particular season)
  - whether it is transferable to other settings (such as the NHS) or other times.
- Any trade-offs between equity and efficiency. Whether or not interventions have an effect on specific population groups in terms of: skin cancer prevention rates, use of sun protection resources or use of physical environmental changes made to help prevent skin cancer.
- Any environmental, social and cultural factors that prevent – or support – effective use of sun protection resources or use of physical environmental changes made to help prevent skin cancer. (For example, these factors might include people’s perceptions of the risks and benefits of UV exposure, including knowledge that exposure to the sun is a source of vitamin D.)
- Any adverse or unintended effects of the intervention, such as vitamin D deficiency or reduced physical activity.
- Availability and accessibility of the intervention for different population groups.

## Appendix C References

Bath-Hextall F, Leonardi-Bee J, Smith C et al. (2007) Trends in incidence of skin basal cell carcinoma. Additional evidence from a UK primary care database study. *International Journal of Cancer* 121: 2105–8

British Association of Dermatologists (2008) Brits unaware of skin cancer risk, new survey reveals [online]. Available from [www.bad.org.uk/site/716/default.aspx#survey](http://www.bad.org.uk/site/716/default.aspx#survey) [accessed 20 May 2009]

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Saraiya M, Glanz K, Briss PA et al. (2004) Interventions to prevent skin cancer by reducing exposure to ultraviolet radiation: a systematic review. *American Journal of Preventive Medicine* 27(5): 422–66