

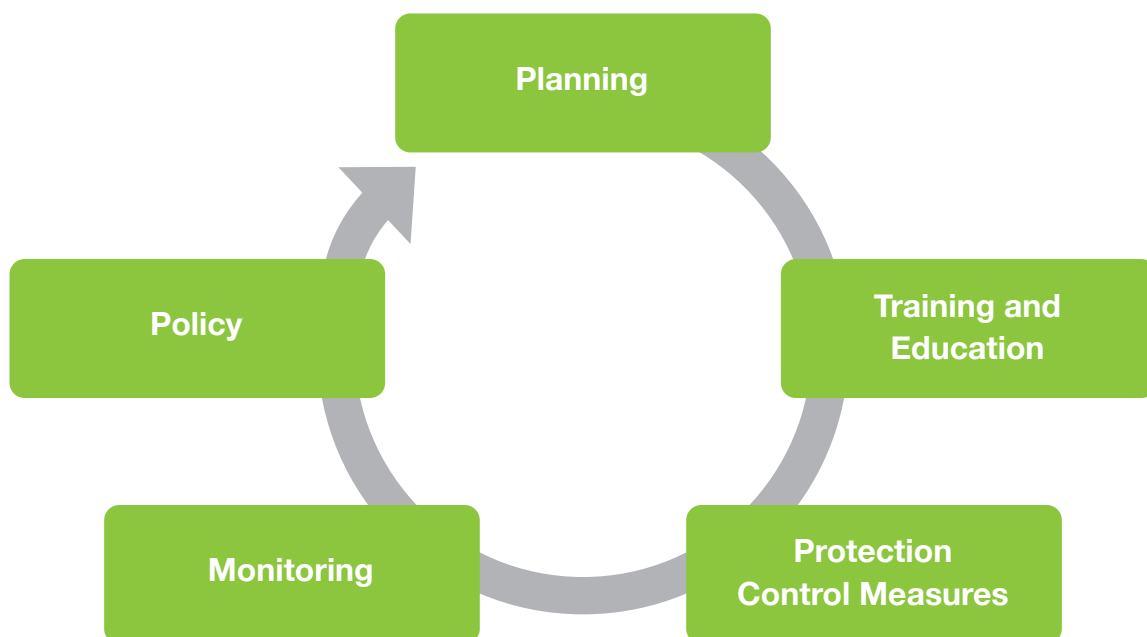
## SunSmart framework for skin cancer prevention in outdoor workers

Skin cancer is the most common cancer in Ireland with over 11,000 cases diagnosed annually and the NCRI has estimated that between 2015-2045 the incidence of skin cancer will almost double<sup>1</sup>. Ultraviolet (UV) radiation from the sun and artificial sources (i.e. sunbeds) is the main risk factor for the development of skin cancer. The International Agency for research on cancer (IARC) classifies UV radiation as carcinogenic to humans (Class 1)<sup>2</sup>.

In the recently published Skin Cancer Prevention Plan (2019-2022) outdoor workers have been identified as a high-risk group<sup>3</sup>. Those who spend all or part of the day working outdoors are at an increased risk of skin cancer as the nature of their occupation exposes them to ultraviolet (UV) radiation from the sun. Outdoor workers can be exposed to between 2-3 times more UV radiation than indoor workers<sup>4</sup>.

It is recommended that the organisation develop a Skin Cancer Prevention Framework to protect outdoor workers from UV radiation from the sun in the workplace. The framework will help to strategically address skin cancer prevention, structure prevention activities and ensure sustainability. It will show the commitment to protecting workers from skin cancer by reducing UV solar exposure and adhering to skin cancer prevention best practice in the workplace.

### Skin Cancer Prevention Framework





## 1. Planning

### 1. Form a small working group on skin cancer prevention

- a. Seek representation from across the organisation to investigate, plan, develop and guide implementation of your skin cancer prevention framework. The group should be made up of Health and Safety representation, occupational health, health and wellbeing, outdoor worker representatives and others as necessary.
- b. Agree Terms of Reference ([see template ToR](#)). Good governance will keep this group focused and productive.
- c. Clarify and understand your legal obligation and duty of care to workers.

### 2. Detail all workers across various departments that are outdoors for all or part of their day regularly

- a. Detail categories of outdoor workers and outdoor job specifics in your workplace. Include sub-contractors and visitors to the workplace, do you need to protect them from solar UV exposure?
- b. Conduct a risk assessment on all outdoor worker positions – who is outdoors, for how long and how often, at what times of the year are they outdoors, what protective measures are in place?

### 3. Research skin cancer prevention in your organisation

- a. What is current practice?
- b. What are the gaps?
- c. Complete the [audit tool](#) for workplaces in skin cancer prevention to assess all elements of current activities.
- d. Conduct [baseline research](#) to record knowledge, attitudes and beliefs, current behaviours in skin cancer prevention, levels of sunburn etc. Research what other organisations are undertaking in skin cancer prevention that might work in your organisation.
- e. Consult workers and their representatives – ask their opinion on what is needed in the workplace, what current gaps are and possible solutions to address those gaps.



#### 4. Develop a skin cancer work plan.

- a. What will you work on this year?
- b. What is the priority?
- c. What did your research tell you?
- d. What is the most pressing need?
- e. What do your workers think?
- f. What budget do you have?
- g. What is the main skin cancer prevention message for this year?

## 2. Protection Control Measures

A comprehensive skin cancer protection framework should include the introduction of protective measures in line with workplace hazard controls, such as, engineering controls, administrative controls and use of personal protective equipment.

### 1. Engineering Controls (measures that reduce exposure to UV by a physical change to the work environment)

- **Shade** can be natural or artificial from permanent or portable structures. Shade can come naturally from trees and shrubs, or artificially from permanent or portable structures such as canopies (see examples of permanent and portable shade structures below).
  - Shade should be available while working outdoors. If shade is not possible, portable shade options may be considered. Another option may be to relocate work to take advantage of existing shade if possible.
  - Shade provides protection against solar UV exposure and can reduce 50 percent of direct UV<sup>5</sup>. You cannot rely on shade alone. You may still receive substantial amount of exposure from indirect sources of UV such as reflection from nearby surfaces. Always combine shade with personal sun protection such as hats, clothing, sunscreen and sunglasses.

- **Surface reflection** (solar UV radiation reflects off different surfaces even while working in the shade. Changing the colour or texture of a surface can reduce the amount of solar UV rays that is reflected off it):
  - Soft and rough or natural surfaces e.g. grass and soil reflects less solar UV than hard and/or smooth surfaces.
  - Dark colours reflect less solar UV; therefore painting a surface darker will help.
- **Window tinting**
  - Clear or tinted films applied to the sides of windows can substantially reduce the amount of solar UV transmitted into a vehicle.

**2. Administrative Controls** (are measures that reduce exposure to solar UV by a change in work practice and the way work is organised)

- Plan outdoor work tasks to be carried out when solar UV is lower. This is typically before 11am and after 3pm from April to September in Ireland.
- Plan work around shade availability
- Move tasks to a shaded area or indoors when possible.
- Rotate staff on outdoor tasks to reduce exposure.
- Check the solar UV index to support this action.





### 3. Personal Protective Equipment

This includes sun protective work clothing, hats, UV protection sunglasses or safety glasses and sunscreen.

- **For clothing choose** – medium to dark fabrics, UPF50+ protection rating (UPF 15 blocks 93.3% UV; UPF 30 blocks 96.7% UV and 50, 50+ blocks 98% UV)<sup>5</sup>, long sleeves and pants, natural fibres or close weave e.g. cotton, check clothing is not worn as thin material will allow UV through.
- **Hats** – shades the face, head, neck and ears. UPF50+ protection rating (as above), tight weave fabric, wide- brimmed – bucket or legionnaire style, hard hats and helmets can have attachable brims and neck flaps.
- **Sunglasses** – should reflect solar UV, close fitting wraparound style sunglasses are best which are CE marked and 100% UVA and UVB protection. Sunglasses should meet the EN 170/EN 172 standards to protect eyes from UV radiation.
- **Sunscreen** – A broad spectrum (UVA/UVB) sunscreen with a sun protection factor (SPF) of at least 30+, with high UVA protection, and water resistant should be used. Apply sunscreen 20 minutes before going out in the sun so that it can be absorbed into the skin, then re-apply every 2 hours and after perspiring. The average-sized adult should apply at least one teaspoon of sunscreen to each arm, leg, front of body and back of body and head (including the face, ears and neck) – that is, 35ml (seven teaspoons) of sunscreen for one full body application<sup>5</sup>. Sunscreen should be easily accessible to workers and expiry dates checked regularly. No sunscreen offers 100% protection from solar UV; it should be used alongside other protective measures such as clothing and shade.
- **SPF30+ lip balm** should be used on the lips.

Involve workers in selecting protective clothing and hats, sunscreen etc. Trial different methods and gather feedback on what works for different workers. Use managers/supervisors as role models.



### 3. Training and Education

- Identify who you need to train across the organisation. Raising awareness and providing training is essential to different categories of staff.
- Use a variety of training methodologies and tools – know your audience, how do they wish to receive training and in what format?
- Use different media channels available e.g. newsletter, flyers, leaflets, posters, e-mail alerts, text messages, pay slip notes, guest speakers.
- Incorporate skin protection training in already established education i.e. induction, management training, supervisor training, toolbox talks, peer to peer training.
- Use family events, competitions, SunSmart/UV awareness incentives, personal stories, famous people's stories and so on.
- Link training and education to on-going monitoring from consultation and surveys for messaging and behavioural change. Within education and training include :
  - Why solar UV safety and skin cancer prevention is important for outdoor workers
  - What is solar UV radiation and what are the risks from solar UV radiation?
  - Who is at risk of getting skin cancer?
  - How to reduce exposure to solar UV radiation while working outdoors. Be SunSmart with the 5 S's – **Slip** on a shirt, **Slop** on sunscreen, **Slap** on a wide-brimmed hat, **Slide** on 100% UV protective sun glasses and **Seek** shade.
  - Get to know your own skin.
- Encourage staff to check their skin regularly and to attend their GP if they have any concerns.



## 4. Policy

- Draft a UV Protection Policy to include why and how solar UV radiation risk will be managed in the organisation.
- This policy should detail aspects in the solar UV protection framework that the organisation is implementing.
- Staff should receive training on the policy.
- This policy should be reviewed annually in line with other policies and linked to other relevant policies e.g. Health & Safety, Health and Wellness etc.

## 5. Monitoring

An annual work plan should be developed by the skin cancer prevention working group. This plan should be monitored for achievements/progress/barriers and future actions. Include the following:

- Ongoing research with workers to monitor shifts and trends in knowledge, attitudes, and behaviours from baseline measures.
- Ongoing feedback should be sought from workers and management to monitor your work plan.
- Record all costs associated with your annual work plan and ring fence budget accordingly for future actions.
- Document all elements of the process of your annual work plan including planning, implementation, evaluation and monitoring.
- Solar UV protection data may be gathered in Health and Safety inspections or supervisor checklists, onsite reviews or similar.
- Record all actions in detail for reviewing the plan; this will identify successes and barriers for reflective practice.
- Ensure on-going awareness for staff of the annual work plan, use all communication channels available to publicise widely.



## References

1. National Cancer Registry Ireland. Cancer incidence projections for Ireland 2020-2045. Cork: NCRI; 2019.
2. International Agency for Research on Cancer. Radiation Volume 100D; A review of human carcinogens. Lyon: IARC: 2009.
3. Skin Cancer Prevention Plan (2019-2022). Department of Health, Ireland 2019.
4. CAREX Canada. [Occupational Exposure Estimate for Solar UV Radiation](#). (2018)
5. Skin cancer and outdoor work. A work health and safety guide. Cancer Council Victoria 2018.