Skin Cancer Prevention Queensland:
Towards a Future of Reduced Skin Cancer Burden for Queenslanders

Skin Cancer Prevention Targets (2022 – 2050)

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Forward

Skin Cancer Prevention Queensland

Queensland is the skin cancer capital of the world, due to the high ultraviolet radiation that occurs year-round, the high proportion of the population with light skin, and the mild climate that is conducive to outdoors activities. The number of skin cancers in Queensland is forecast to continue to increase for the next several decades, partly due to population aging. With a lifetime risk of 2 in 3, most Queenslanders will know somebody who has been affected by skin cancer.

Queenslanders commonly protect themselves from the sun by wearing sunscreen, protective clothing, hats, and sunglasses during planned outdoors activities. However, these sun protection behaviours are often not sufficient, and sunburn remains common.

We now also know that people receive considerable sun exposure during everyday activities when they are not well protected, and that the impact of such sun exposure is cumulative. Daily sunscreen application is advised to avoid these incidental exposures, but this message has not been widely disseminated.

It is clear that there are still opportunities to reduce the incidence of skin cancer in Queensland. In 2022 the collaborators of Skin Cancer Prevention Queensland, representing government departments, universities, medical colleges, not-for profit organisations, sporting organisations and cancer advocacy groups, reviewed the existing evidence of the causes of skin cancer and the data on effective skin cancer prevention methods. Based on these deliberations, they set ambitious 2030 (-5%) and 2050 (-25%) skin cancer reduction targets.

This report details the supporting evidence for these targets. We hope that it will inspire all of Queensland to come together to achieve these reductions in the incidence of skin cancer.

Professor Monika Janda
Co-Chair, Skin Cancer Prevention Queensland

Professor Rachel Neale
Co-Chair, Skin Cancer Prevention Queensland

Skin Cancer in Australia

Australia has the highest incidence rate of skin cancer in the world.[1] Each year, skin cancer accounts for around 80% of all newly diagnosed cancers, and it is estimated that at least two in three Australians will be diagnosed with a skin cancer before the age of 70.[2, 3] Skin cancer is Australia's most expensive cancer, costing the Australian Health System more than $1.7 billion annually (including diagnosis, treatment, and pathology).[4]

Skin cancer is characterised as the uncontrolled growth of abnormal skin cells. There are three types of skin cancers: basal cell carcinomas (BCC) & squamous cell carcinomas (SCC) (collectively referred to as keratinocyte cancers), and melanoma.[5] Keratinocyte cancers are the most commonly diagnosed, with an annual estimate of over half a million new cases of SCC and BCC diagnosed in Australia.[6] Melanoma is the most serious type of skin cancer, responsible for the death of almost 1,5000 Australians in 2020.[3] Unprotected exposure to ultraviolet (UV) radiation is the leading risk factor for the development of ~95% of melanoma and ~99% of keratinocyte cancers in Australia.[7-9] Additional factors that increase the risk of developing skin cancer include:

- A personal or family history of melanoma and/or other skin cancers
- Having many moles (or naevi)
- Having light skin that burns easily
- Frequent sunburn as a child, especially if the sunburn led to blistering
- Exposure to artificial UV radiation (e.g., solariums)

Skin Cancer in Queensland

Queensland is infamously titled the 'Skin Cancer Capital of the World'. Queensland's melanoma incidence rates are 40% higher than the national rate, with more than 3,600 Queenslanders diagnosed with melanoma, and over 350,000 non-melanoma skin cancers treated each year.[10] Melanoma is the most commonly diagnosed cancer among 15 – 39 year olds and the most common cause of cancer death among those aged 20 – 39 years old.[11]

> More Queenslanders die each year from skin cancer than in road accidents.

Skin cancer places extensive burden on the healthcare system. In 2014, the cost to Medicare for consultations and treatments of melanoma was $2.8 million and for non-melanoma skin cancers was $43.5 million.[11]

It is estimated that over 95% of skin cancers are caused by exposure to UV radiation, so sun protection is critical. Current guidelines are: (i) sunscreen should be applied on all days when the UV index is forecast to reach 3 or more at any time during the day to protect against incidental exposures (the UV index reaches 3 on the vast majority of days in Queensland, including in winter);

and (ii) when participating in outdoors activities at times when the UV index is 3 or greater, a full suite of sun protection behaviours should be used. These are:

- ***Slip!*** on sun protective clothing (e.g., long sleeve shirts, long pants etc)
- ***Slop!*** on SPF 30+ or higher water-resistant sunscreen
- ***Slap!*** on a broad-brimmed hat
- ***Seek!*** shade
- ***Slide!*** on wraparound sunglasses

Challenges to Skin Cancer Prevention in Queensland

Insufficient Government Investment

The "Slip! Slop! Slap!" campaign of the 1980s is one of Australia's most successful public health interventions.[7] In the 40 years following the launch of the campaign, notable successes have been achieved, including population-wide improvements in sun protection behaviours and decreased melanoma rates in young Australians. Despite the effectiveness of these campaigns, there has been limited government investment in sun-safe primary prevention initiatives at a national or state level.

In 2021, the Australian government committed $20 million over a 2-year period to skin cancer prevention campaigns, which marks the first nationally coordinated campaign in more than a decade (2008-09).[7] However, continued funding of nationally coordinated mass traditional and social media skin cancer prevention campaigns as well as evaluations of how successfully they change behaviour in the target population are needed.

Although melanoma deaths surpass the current death toll on Australian roads, government funding for road safety initiatives far exceeds current investment into skin cancer prevention. While skin cancer is considered almost entirely preventable through protection against UV radiation exposure, the Australian Government will spend 100 times more money on treating skin cancers than it will on prevention in 2022.[12]

> Continued investment in primary prevention is the most effective way to reduce Queensland's skin cancer burden.

Negligible Changes in Uptake of Sun Protection Behaviours & Sunburn Rates

Over the past 10 years, there have been minimal changes in both attitudes towards sun protection, and the adoption of sun protective behaviours of Queenslanders.[10] Between 2010 and 2020, there were no significant changes in the percentage of people reporting sunburn or blistering sunburns, and only marginal changes in the percentage of adults practicing the five sun-safe behaviours. Additionally, it is estimated that only 20% of adults use a combination of sun protection behaviours when outside in summer (including wearing a broad-brimmed hat, applying SPF 30+ sunscreen, and wearing sun safe clothing).[10]

Since overexposure to UV radiation is the leading risk factor for skin cancer, improvements to everyday sun protection behaviours of Queenslanders are key to reducing skin cancer incidence.

Rising Rates of Skin Cancer Incidence in Queensland

The burden of skin cancer is increasing each year. From 1982 to 2018 in Queensland:

- The age-standardised melanoma incidence rate increased from ~45 to ~75 per 100,000.
- The melanoma incidence rate in males was higher and has increased more rapidly than that in females. For example, the age-standardised incidence of melanoma in males increased from ~50 to ~90 per 100,000, compared with an increase from ~45 to ~60 per 100,000 in females.
- Age-standardised melanoma mortality rates have remained relatively stable for females (~3 per 100,000) but have increased for males (from ~6 to ~9 per 100,000). The mortality rate in males compared with females was two times higher in 1982, and three times higher in 2018.

> Primary prevention action will be vital to reducing skin cancer incidence in the future.

Lack of Queensland-Specific Skin Cancer Prevention Targets

Currently, Queensland does not have any active skin cancer prevention strategies that aim to reduce the incidence of skin cancers. There is a significant need to develop a comprehensive framework of actionable targets and opportunities to reduce the burden of skin cancer in Queensland.

Skin Cancer Prevention Queensland

Purpose

Skin Cancer Prevention Queensland was established to reduce the burden of skin cancer in Queensland though primary prevention.

Objectives

- To identify and address policy and/or program gaps in Queensland, overall and for priority populations and settings
- To facilitate collaboration between member organisations to maximise the impact of skin cancer prevention in Queensland
- To initiate and support advocacy efforts to prioritise investment and action in skin cancer prevention

Addressing Skin Cancer Prevention in Queensland

With the goal of facilitating collaboration and engagement between different member organisations, Skin Cancer Prevention Queensland convened a meeting and workshop (May 2022) to discuss the current skin cancer prevention activities in Queensland and set targets for skin cancer reduction. The meeting included a series of invited presentations that covered: the current trends in skin cancer; trends in sun protection and sunburns in Queensland; the economic burden of skin cancer and the benefits of primary prevention; and current skin cancer reduction targets set by Australian organisations. Representatives from education, workplace health and safety, sports and recreation, infrastructure planning, and outdoor worker sectors also discussed challenges and opportunities for skin cancer reduction in these settings (see *Appendix A – C* for more detailed information).

The meeting was followed by an interactive workshop where attendees discussed the prevailing gaps in skin cancer prevention in Queensland and agreed upon several goals to reduce the incidence of skin cancer. Skin Cancer Prevention Queensland proposed the following aims to address the increasing burden of skin cancer in Queensland:

PRIMARY AIM

- To reduce the overall incidence of keratinocyte cancers and melanomas in Queensland

INTERIM AIMS

In order to achieve the primary aim, we set some intermediate and measurable goals. These are:

- To improve sun protection behaviours of Queenslanders
- To reduce the percentage of Queenslanders being sunburnt

Priority Settings

In addition to targeting the Queensland population as a whole, current evidence suggests that populations in some specific settings have particularly low uptake of sun protection behaviours. These priority settings include outdoor work, outdoor sports, and secondary schools.

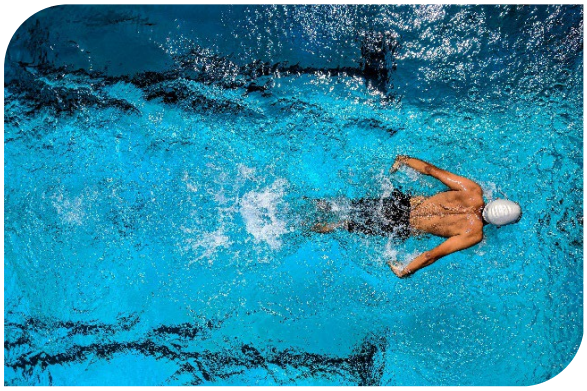
Outdoor Work

Workers who are exposed to the sun are at risk of being overexposed to ultraviolet radiation (UVR). Outdoor workers are exposed to five to ten times more UVR than indoor workers, which increases their future risk of developing skin cancer.[13] Businesses should create a sun safe environment and workers should take measures to protect themselves from UVR. Workers and management can work together to be sun safe and reduce the risks of skin cancer. A safe place of work benefits everyone.

For employers or persons conducting a business or undertaking (PCBU), it's your duty to use a risk management approach to protect your workers as outlined in the *Work Health and Safety Act 2011*.

Outdoor Sports & Recreation

Over the last decade, there have been negligible changes in attitudes towards sun protection in outdoor sports. People who regularly engage with outdoor sports experience substantially higher UV radiation exposure for extended periods of time, often with minimal sun protection.[14] For example, uniform codes often require considerable skin to be uncovered by clothing, and sunscreen is not provided at sporting fixtures. It is critical to focus on improved engagement with athletes and sporting organisations to improve sun protection behaviours in this space.



Education

Due to competing high-risk behaviours and priorities, the uptake and implementation of sun-safe policy generally declines in secondary schools compared with early childhood centres and primary schools. Additionally, Queensland data demonstrate that young adults' use of sun protection behaviours decreases around the age they transition to secondary school.[10] For example, adolescents aged 12–17 years are 3.4 times more likely than children aged 5–11 years to practice none of the five sun protection behaviours (14% compared to 4%), collectively resulting in more sunburns.[10]

Skin Cancer Prevention Queensland Goals & Targets

Goal 1: Increase Queenslanders' use of sun protection behaviours

Overexposure to UV radiation is the leading risk factor for increased future risk of developing skin cancer. Recent data show there to be minimal changes in attitudes towards sun protection, with only 20% of adults indicating they use a combination of sun protection strategies when outdoors in summer.[10] Further, the guidelines to apply sunscreen daily were only released in 2019; there is little information about how frequently this occurs in Queensland, but there is likely to be considerable room for improvement, particularly in men.

Sunscreen Target: *50% of Queenslanders (Fitzpatrick skin type 1 – 4) applying daily SPF 30+ sunscreen by 2030*

Justification: Most recent data suggests that less than 60% of adults and 80% of children apply SPF 30+ sunscreen when outdoors in summer.[10] Additionally, data suggest the sunscreen market has a current retail value of $200 million, which equates to approximately 200 ml per person annually. Considering Cancer Council Australia's recommendations to use at least seven teaspoons of sunscreen (~35ml) per application for full coverage, it is clear that there is inadequate sunscreen use at a population level. Sunscreen use is an ideal behaviour to target, since modelling suggests that maintaining prevailing levels of sunscreen use could reduce skin cancer incidence by 10 – 15%, and interventions to increase sunscreen use could reduce melanoma incidence by ~10% in high incidence populations.[15]

Progress Monitoring & Evaluation

- Queensland Preventative Health Survey

Box 1: Queensland Preventative Health Survey (QPHS)

The QPHS is a general population survey that collects information about preventative health indicators from a random sample of ~12,000 adults. Since 2010, the survey has collected information on the percentage of people reporting sunburn in the past 12 months annually, and whether this caused blistering (captured in most years). Every second year, respondents detail their adoption of sun-safe behaviours (sun-safe clothing, broad-brimmed hats, SPF30+ sunscreen, wrap-around sunglasses, and shade-seeking) in the past 12 months. A question about the frequency of routine sunscreen application was also included in the most recent questionnaire (2022-2023), with results expected to be made available late 2023.

Hat-Wearing Target: *50% of Queenslanders wearing broad-brimmed hats when outside by 2030*

Justification: According to the Office of the QLD Chief Health Officer 2016 report,[11] approximately 46% of adults wore a broad-brimmed hat when outside in summer. However, the 2020 data suggests that this figure has decreased by 6%, with now only ~40% of adults wearing broad-brimmed hats in summer.

Progress Monitoring & Evaluation:

- Queensland Preventative Health Survey

Goal 2: Reduce the number of Queenslanders being sunburnt each year

In the Australian sun, sunburn can occur in as little as 15 minutes in summer. Almost half of all Queenslanders are sunburnt annually, which significantly increases the future risk of developing skin cancers.

Sunburn Target: *20% reduction (in each age group) in the percentage of people reporting being sunburnt in the past year by 2030*

Justification: A significant percentage of Queenslanders report being sunburnt each year, and there were no significant changes between 2010 and 2020. Reducing the prevalence of sunburn is an important indicator of improved sun protection behaviours and will lead to reduced incidence of skin cancers.

According to the Office of the QLD Chief Health Officer 2020 Report:[10]

- 49% of adults and 45% of children were sunburnt in the previous 12 months
- 19% of children were burnt once in the previous 12 months, 14% were burnt twice, and 11% were burnt three or more times
- Of those that were sunburnt within the last 12 months, approximately 10% of both adults and children experienced a blistering sunburn
- 32% of children had experienced five or more sunburns in their lifetime and 0.9% had five or more blistering sunburns
- Adult males were 23% more likely to report being sunburnt in the past 12 months than females, but there was no difference between boys and girls (<18 years)
- Young adults (18 – 29-year-olds) were at least four times more likely to report sunburn than older adults (65 years and older)
- Adolescents aged 12 – 17 years were approximately 36% more likely to have been sunburnt in the past 12 months than 5 – 11-year-olds.

Progress Monitoring & Evaluation

- Queensland Preventative Health Survey

Goal 3: Reduce the overall incidence of skin cancers in Queensland

In Queensland, the incidence and burden of skin cancers are rising each year, despite skin cancer being considered almost entirely preventable through avoiding excessive UV radiation exposure. Current modelling suggests that improvements to primary prevention, including improving daily practice of sun-safe behaviours when outdoors, has the potential to markedly decrease the incidence of skin cancers. Continued investment into primary prevention, as well as enacting established research priorities and opportunities, will be key to reducing the overall incidence of skin cancers in Queensland.

Skin Cancer Targets

- **2030 Target**: Reduce the incidence of melanoma and KC by 5%
- **2050 Target**: Reduce the incidence of melanoma and KC by 25%

Progress Monitoring & Evaluation:

- Cancer registry (Australian Cancer Database)
  - Melanoma incidence
- Medicare Benefits Schedule (MBS)
  - Excision of keratinocyte cancers

Prioritised Action and Research Opportunities

Initiatives to Reduce the Incidence of Skin Cancer

- Implement modern mass and social media campaigns that promote sun safety, and evaluate the reach and impact of these.
- Conduct audits of pre-existing natural and man-made shade in high-use public areas to assess shade availability and utilisation.
- Consider creating an accreditation program that certifies an individual and/or organisations as compliant with industry-relevant sun-safety regulations (with a regular re-renewal process, such as that required for first-aid certification).
- Consider partnering with Registered Training Organisations (RTOs) and other tertiary institutions that provide occupational health and safety qualifications to improve the content and focus on managing the risks of exposure of outdoor workers to UVR.
- Investigate sunscreen
    - Audit market data for sunscreen use
    - Develop a better understanding of why many Australians are not regularly using sunscreen and address (perceived or actual) barriers
- Investigate sun-protective clothing
    - Audit market data for sun-safe clothing use
    - Determine the characteristics of 'sun-safe clothing' (e.g., what body surface area is currently protected and if this is sufficient; evaluation of protective fabrics, and if there should be initiatives to improve the clothing surface area).
    - Develop a better understanding of barriers and how to encourage Queenslanders to improve the use of sun-protective clothing.

Priority Settings

Several populations in specific settings are at higher risk of developing skin cancer. Thus prioritised action within Outdoor Work, Outdoor Sports & Recreation, and Education sectors are vital.

Outdoor Work

- Implement social media campaigns targeting outdoor workers to improve sun-protection behaviours in the workplace, with campaigns being co-designed with representatives from relevant industries.
- Encourage workers and management to work together to be sun safe and reduce the risks of skin cancer by creating safe work.
- For employers or persons conducting a business or undertaking (PCBU), it is your duty to use a risk management approach to protect your workers as outlined in the *Work Health and Safety Act 2011*. Follow a four-step risk management process to assist your business to meet its responsibilities under the work health and safety (WHS) laws.
- Conduct an audit of sun-safety courses relevant to outdoor workers to determine: the number of active courses; which companies and/or entities are responsible for designing

and running the courses; and the quality of information, completion time, and impact on attitudes and behaviours.

Outdoor Sports & Recreation

- Implement social media campaigns targeted at athletes and sports organisations to improve sun-protection behaviours in sports, with campaigns being co-designed with sporting organisation representatives and relevant to athletes (e.g., potential to focus on the positive impacts of sun protection and negative impacts of sunburn on athletic performance).
- Currently, there is a lack of sun-safe policies that are adequately incorporated into sporting organisations' development and daily operations. In collaboration with major sporting bodies (e.g., Australian institute of Sports), the implementation of standardised sun-safe policies should be investigated.
- Provide support to amateur sports clubs, most of which are run by volunteers, to facilitate implementation of sun-protection initiatives.
- Conduct an audit of pre-existing shade within sporting establishments to assess shade availability and utilisation, and to identify areas that require additional shade installation.
- Investigate creating an awards system that recognises and awards sporting organisations for developing and implementing sun-safe policies. Further investigate the feasibility of a tiered program with incentives for uptake (e.g., highest tier qualifies the organisation for government funding).
- Investigate improvements to sun-safe uniforms for athletes and determine the need to impose sun-safe clothing regulations.

Education (Secondary Schools)

- Implement social media campaigns targeted at young adults to improve sun protection behaviours in secondary schools, with campaigns being co-designed with young adults and educators to ensure they are relevant to secondary education settings.
- Conduct an audit of pre-existing shade within secondary schools to assess shade availability and utilisation.
- Improve the implementation of sun-safe policies in secondary schools to normalise sun-safe behaviours in adolescents.

Advances in Primary Prevention

Skin Cancer Prevention Queensland

Skin Cancer Prevention Queensland members are actively involved in key initiatives to reduce skin cancer burden in Queensland. Several case studies follow, to exemplify current engagement in this space.

Case Study 1: Uniform Solutions

Cross-Government Collaboration Delivering Sustainable Sun-Safe Schools

Wearing covering clothing can reduce the rate of mole development in childhood

Children's skin is particularly vulnerable to the damaging effects of the UV radiation in sunlight, which is the main environmental risk factor for skin cancer.[16] Although Queensland's sunny climate is envied by many residing elsewhere, the maximum intensity of ambient solar UV radiation is high for most of the year. This is particularly true in tropical north Queensland, where the maximum daily UV index is high even in winter, and extreme during summer (Figure 1a and 1b).

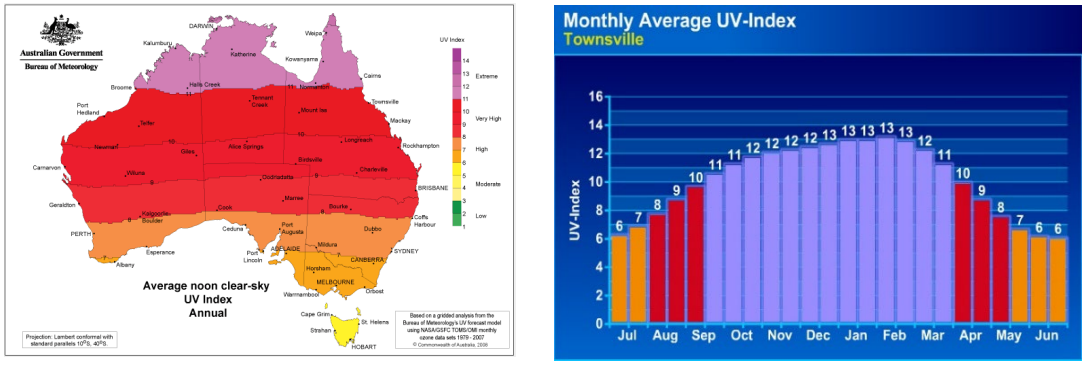


Figure 1: (a) left: Distribution of average annual noon clear-sky UV index over Australia; (b) right: Average monthly noon clear-sky UV-index for Townsville, North Queensland.

Having numerous pigmented moles is associated with high lifetime risk for developing melanoma, is more common in sun-sensitive people who spent a lot of time in the sun during their childhood than in those who received less childhood exposure. Most children raised in Queensland receive high doses of solar UV radiation in summer and winter,[17, 18] and consequently develop more moles than children raised in less sunny regions.[19-22]

A cluster randomised controlled trial (RCT) conducted in childcare centres in Townsville, Queensland[23] found that the amount of skin covered by clothing is as important as how much UV is transmitted through the fabric from which the garment is made (reported as the Ultraviolet Protection Factor, UPF). Children who routinely wore sun-protective study garments (Figure 2) at the 13 intervention childcare centres developed fewer pigmented moles in total, and on body sites specifically covered by study garments (upper arms, thighs, trunk, posterior neck), by 3.5 years of follow-up when compared to children the same age at the 12 control centres (who wore their own clothing).[23, 24] This study provided strong evidence that increased garment coverage reduces the rate of mole development in childhood, and thus future risk of developing melanoma.[24]

Figure 2: Study garments worn by children attending intervention childcare centres in the cluster-RCT.

Variability in clothing cover by summer school uniforms

Subsequent research examining the design of regulation summer school uniforms across Queensland identified significant variability in the proportion of the skin's surface covered and the sun protection provided.[25-27]

The Queensland Government Department of Education (DoE) and Preventive Health Branch sought to rectify this by including mandatory sun-safe specifications in the procurement process for the supply of school uniforms in Queensland. A sun-safety advisory panel worked with the DoE's Procurement Branch to develop design criteria and garment-coverage specifications that met or exceeded those in the revised Australian Standard (AS/NZ 4399:2017) to optimize the sun protection afforded by Queensland state school uniform garments. Shortlisted vendors provided samples for the advisory panel to assess against these specifications using established methods.[28] A Standing Offer Arrangement (DET 78764)[29] was negotiated between DoE and successful suppliers for the supply of compliant Queensland state school uniforms for a 4-year term commencing in January 2019.

This model provides a simple and sustainable solution for the supply of sun-safe school uniforms in Queensland and has been well received by suppliers and schools. Further research will determine whether this policy-based intervention significantly improved the sun-safe design and proportion of body surface area covered by summer school uniforms supplied by DoE's list of "preferred suppliers" since 2019 compared to those available previously.

The continued success of this model requires ongoing assessment and monitoring of the compliance of summer school uniform garments supplied by current and future preferred DoE suppliers with these mandatory sun-safety specifications. We have been exploring how the use of technology may facilitate assessment of compliance.[30]

Dr Simone Harrison
Director and Principal Research Fellow, James Cook University Skin Cancer Research Unit

Jodie Antrobus
Senior Health Promotion Officer, Prevention Health Branch, Queensland Health

Case Study 2: Interactive Text Messaging Reduces Sunburn in Younger adults

Regular and interactive text messaging has been shown to be an effective way to help young people avoid sunburn by prompting sun-safe behaviours.

A team led by University of Queensland researchers Professor Monika Janda and Professor H Peter Soyer conducted a randomised controlled trial, called the SunText Trial, to establish the optimal text messaging intervention to achieve behaviour change. The SunText study included 389 men and women between the ages of 18 and 40 who lived in Queensland, and were at risk of skin cancer.

The SunText Trial tested four variations of personalisation, interactivity and message frequency over a six-month period, with participants providing regular feedback. The texts were personalised with each participant's name and gender, and skin cancer risk factors.

> Overall, the percentage of people reporting sunburn over the past 4 weeks decreased from 40% of participants at the start of the texting intervention to 7% at the end.

One year after baseline, the prevalence of sunburn remained significantly below those at the start of the study, at 24%. Interactive messaging, where people were asked to respond, was the optimal approach. For example, 'Dear John, can you get sunburnt on a cloudy day? Text back yes or no'.

The researchers also trialled sending three messages per week and seven messages per week and found that three was the most effective. This work adds to growing evidence suggesting that regular text messages are an effective tool for promoting sun protection behaviours.

The program of research was published in the *American Journal of Preventive Medicine*[31] and *Translational Behavioral Medicine.*[32]

Professor Monika Janda
Centre for Health Services Research, University of Queensland

Case Study 3: Shade Policy (Strategic Tree Planting)

Creating more shade for Queenslanders

Increasing the availability of high-quality shade in public areas confers multiple benefits for Queenslanders. In addition to creating cooler more comfortable and visually appealing environments, effective shade can reduce UV exposure by up to 75%.

> As the majority of people will actively seek to sit, walk or play in shaded environments when available, efforts to increase shade availability will contribute to reducing Queenslanders' exposure to UV radiation, risk of sunburn, and ultimately the incidence of skin cancer.

Skin Cancer Prevention Queensland is pleased to see an increasing focus on shade in a number of recent policies, including the mandatory requirements for street tree planting along footpaths in the Model Code for Neighbourhood Design. To further support state agencies, local government authorities, and private developers to prioritise shade in public areas, Queensland Health is progressing the development of evidence-informed Tree Planning and Planting Guidance Resources. This guidance will include recommended tree species and planting intervals and orientation to maximise shade provision and UV protection for Queensland's four climatic zones.

Nathan Downs
Associate Professor, University of Southern Queensland

Jodie Antrobus
Senior Health Promotion Officer, Prevention Health Branch, Queensland Health

Case Study 4: Outdoor work opportunities

Whilst much has changed towards prevention in outdoor work, behaviours regarding exposure to UV radiation can still be improved.

Under the Work Health and Safety Act 2011,[33] employers (or persons conducting a business or undertaking) have a duty to use a risk management approach to protect their workers, including from the harms of exposure to UV radiation. The WorkSafe Queensland *Sun safety and skin cancer* webpage[34] has a range of resources to assist both employers and workers to identify and manage the risks associated with working outdoors. These resources include the Sun Safety Toolbox PowerPoint and the Skin cancer and outdoor work: A work health and safety guide.[34]

SCPQ industry partner, Danger Sun Overhead (DSO), is a recognised education provider and has become an industry leader in the provision of skin cancer awareness, education, and advocacy services. DSO's pillars of awareness, prevention, early detection, and support underpins the organisation's vision to reduce the impact of skin cancer in the workplace and across our communities. The DSO program supports employers of outdoor workers to develop comprehensive sun-protection policies that ensure multiple strategies are implemented to maximise UV protection for their workers.

In addition to education, DSO undertakes practical initiatives. For example, DSO has supported the provision of shade for use by workers involved in a large Brisbane CBD construction project. DSO has been delivering training to the workers at the sites since the project's inception, and a practical initiative implemented by the employer has been the purchase of multiple large DSO-badged marquees to provide shelter for workers across this large project. The shelters are portable and designed to move around the project as it continues to evolve.

Jo Crotty
Founder and Training Manager, Danger Sun Overhead

State Government Investment

The Queensland Government has committed $8.4 million over four years from 2022-23 to 2025-26 to deliver a state-wide social marketing campaign and outreach skin cancer screening clinics in areas of high need.

Future Recommendations

Given Queensland's title as the 'Skin Cancer Capital of the World', sustained and coordinated investment in prevention is critical to achieve the targets laid out in this report. Skin Cancer Prevention Queensland advocates for the development of an updated Queensland Skin Cancer Prevention Strategy to support prevention strategies over the next 20 years.

> The burden of skin cancer for Queenslanders is rising each year, making the creation and implementation of a government-coordinated skin cancer prevention strategy timely and essential.

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Appendix

Appendix A: List of all the organisations affiliated with Skin Cancer Prevention Queensland

Academic and Research Sector	**Government Sector**	**Clinicians and Professional Representative Organisations**	**Not for Profit and Education, Advocacy and Patient Support Organisations**
QIMR Berghofer Medical Research Institute	Office of Industrial Relations	Australian College of Dermatologists	Danger Sun Overhead Program
University of Queensland, Centre for Health Services Research, Faculty of Medicine	Department of Education	Skin Cancer College of Australasia	Melanoma Patients Australia
James Cook University	Queensland Catholic Education Commission	Royal Australian College of General Practitioners	Melanoma Awareness Foundation
Griffith University	Independent Schools Queensland	Australian College of Rural and Remote Medicine	Cancer Council Queensland
Queensland University of Technology	Department of Health, Prevention Strategy Branch	Princess Alexandra Hospital	Excite Science
University of Southern Queensland	Department of Health, Strategic Communication Branch		Bakslap
Australian Skin & Skin Cancer Research Centre	Department of Tourism, Innovation and Sport		

Appendix B: Attendees of the May 2022 Skin Cancer Prevention Queensland Meeting & Workshop

1. Monika Janda, *University of Queensland*
2. Rachel Neale, *QIMR Berghofer*
3. Katrina Crompton, *Queensland Health*
4. Jodie Antrobus, *Queensland Health*
5. Telena Hona, *University of Queensland*
6. David Whiteman, *QIMR Berghofer*
7. Simone Harrison, *James Cook University*
8. Douglas Lincoln, *Queensland Health*
9. Andrea Henning, *Queensland Health*
10. Jane Sander, *Queensland Health*
11. Melissa Kerr, *Australian Skin and Skin Cancer Research Centre*
12. Louisa Gordon, *QIMR Berghofer*
13. Sheleigh Lawler, *University of Queensland*
14. Jo Crotty, *Danger Sun Overhead*
15. Irene Munro, *Danger Sun Overhead*
16. Susan Clemens, *Queensland Health*
17. Janine Lees, *Workplace Health and Safety Queensland*
18. Nathan Dunn, *Cancer Alliance Queensland*
19. Marc Wittmann, *Hockey Queensland*
20. Carly Hyde, *Cancer Council Queensland*
21. Paul Vardon, *Queensland Health*
22. Lorraine Bell, *Cancer Council Queensland*
23. Peter Soyer, *University of Queensland*
24. Levi Swann, *Queensland University of Technology*
25. Lynette Hunt, *Skin Cancer College Australasia*
26. Scott Duffield, *Queensland Health*
27. Caitlin Horsham, *University of Queensland*
28. Nathan Boase, *Queensland University of Technology*
29. Simone Bennett, *Queensland Department of Health*
30. Saba Khan, *Cancer Council Queensland*
31. Ken Dutton-Regester, *Excite Science*